



DEEP SEA Revealing its Mysteries



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TRUE INNOVATION:
Where Does it Start?

A deep-sea angler fish



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FEATURES

7 | Deep Sea Deep Secrets

Now that we have the new technologies, all of the mysteries of the sea will be revealed.

BY DAVID GALLO, PH.D

17 | Shades of White

How perspective can impact innovation.

BY ANTHONY PAUSTIAN, PH.D

23 | The Missing Ingredient

The magic of true innovation.

BY ADAM CARROLL

29 | Innovation is Great . . .

But Where Do You Start?

BY MITCH MATTHEWS

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COVER PHOTO:

This deep-sea angler fish was collected from a submersible at approximately 800 meters depth, where little or no sunlight penetrates. Just 3 inches long but fierce-looking, the fish has a long spine tipped with bioluminescent tissue that it can dangle in front of its mouth. Scientists think the light attracts prey that become the fish's dinner. The prominent bumps that look like rivets are part of the fish's sensitive pressure-detection system. WHOI scientists have studied deep-living animals in many parts of the world, including the Atlantic, the Philippines and Indonesia, often finding new species.

Photo by Larry Madin,
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EDITOR'S NOTE

Celebrate! Innovation at the DMACC West campus started as one man's idea.

I was sitting with my fellow faculty members at a fall 2009 faculty meeting when our provost casually mentioned, "I want to do something different for our students."

When I heard that statement, I knew to pay close attention and pull my thoughts away from the things that distract all teachers: papers to grade, meetings with students and colleagues, preparing for classes (and the next semester).

The Des Moines Area Community College West Campus Provost, Dr. Anthony Paustian, is a unique and creative guy. Also a bit impulsive. Ambitious. He can be demanding. He's one who "sees" things differently and takes others along for the ride (ready or not).

What Tony proposed was a week-long adventure for our students: Innovation Week, or iWeek (now known as Celebrate! Innovation Week), a chance for students to step outside the traditional classroom and become immersed in hands-on activities and discussions geared toward fostering creativity and innovation. When he explained his idea, the room grew quiet. How would this be organized? Who would do what? Where would we get the time and money?

Few could dispute the need to promote and encourage innovation, particularly among young people. Three years ago, many were (and still are) feeling the effects of the economic crisis. Higher education costs continue to rise (then and now). Environmental concerns, such as changing weather patterns and depletion of natural resources, have grown impossible to ignore.

At that original meeting, we took a collective deep breath and envisioned what an "Innovation Week" might look like. iWeek in March 2010 consisted of roughly 90 sessions, planned, organized, and often presented by DMACC West faculty and staff. The inaugural iWeek—stimulating, fun, and sometimes

messy—passed quickly. The concept of iWeek was just one more step in the ongoing evolution of DMACC West Campus.

Since the campus opened in 2001, each classroom has been remodeled as part of recognizing "200+ Years of American Educators" and features wall-sized murals, videos, and text celebrating such innovators as Norman Borlaug, Jane Addams, Thomas Edison, and George Washington Carver (among others). Museum-quality displays line the common areas of DMACC West; each display showcases artifacts and text documenting "20 Years of Personal Computing." Developed by the campus telecommunications program, "150 Years of Telecom" illustrates the rapid advances in electronic communication, from the telegraph to the Internet, through artifacts, visuals, video, and faculty tours to students and guests. (For more information about the Celebrate! Innovation Learning Exhibition, see www.dmacc.edu/ci).

iWeek 2011 featured more than 130 corporate CEOs, leaders, and entrepreneurs who immersed students and the public in a study of "Ideas in Action." The third iWeek (2012) celebrated "The Power of Imagination," with keynote presentations by Steve Wozniak, the co-founder of Apple, Inc. and father of the personal computer; Dr. David Gallo, oceanographer and co-expedition leader for both the mapping mission to the RMS Titanic and the successful search for the missing aircraft Air France 447; and Fritz Maytag, considered to be the father of modern microbreweries and currently the chairman of Maytag Dairy Farms, Inc. (the maker of Maytag Blue Cheese).

In 2013, Innovation Week will become Celebrate! Innovation Week, (ciWeek). With the launch of *ci Magazine*, DMACC West Campus continues to promote the ciWeek experience and celebrate creativity and

innovation, plus showcase the knowledge and expertise of ciWeek participants. In "Deep Sea Deep Secrets," Dr. David Gallo points out the urgent need for continued ocean exploration; his message seems especially timely given ongoing global environmental issues. This summer, people across the world watched with awe as elite athletes competed in the 2012 Summer Olympics in London. In "Innovation Is Great . . . But Where Do You Start?" Mitch Matthews shares the story of Richard Fosbury, a 1968 Olympian who set the world record and won a gold medal in the high jump, but only after he was willing to embrace change, despite the derision of others. Anthony Paustian, the one who envisioned ciWeek from the beginning, shares the impact of perspective on the innovative process and our future. And Adam Carroll, in "The Missing Ingredient: The Magic of True Innovation," provides additional insight to what makes a creative idea an innovative reality: collaboration with others who are willing to take risks.

With ciWeek 2013, which will take place March 4–7, our commitment to "do something different" for our students and our community continues to grow. The theme is "Building a Better Future." This quest is both timely and at the heart of what we do at DMACC. Yes, the thought of all that goes into this process is still a bit daunting, just as it was in 2009, just as it should be. Our hope is that you will enjoy this introduction to ciWeek, and better yet, join us at iWeek 2013. Let's build a better future together.



Beth Baker-Brodersen is a professor of English at the DMACC West Campus and District Chair of communications for DMACC. She may be reached at bmbakerbrodersen@dmacc.edu.

innovation

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construct

design

BIM

transform

build

inspire

imagination



The manned submersible Alvin and the autonomous underwater vehicle Sentry. Photo by Chris German, Woods Hole Oceanographic Institution. ©Advanced Imaging and Visualization Laboratory, Woods Hole Oceanographic Institution



BY DAVID GALLO, PH.D

DEEP SEA DEEP SECRETS

Now that we have the new technologies, all of the mysteries of the sea will be revealed.

That's a bold, daring statement. But it wasn't made by me, Dr. Robert Ballard (RMS Titanic discoverer), or Jacques Cousteau. It wasn't even made in the 21st or 20th centuries. It was published in 1892 by the Challenger Expedition's chief scientist. The technologies he talked about—a new type of net capable of collecting deep-sea animals—involved handling the cables used to toss lead weight over the ship's side to measure great ocean depth. The Challenger Expedition left Portsmouth, England on December 21, 1872 on a 3-year voyage to understand all there was about the sea. Although the voyage launched oceanography, revolutionizing knowledge of the sea, it hardly scratched the surface of revealing the undersea world.



The hybrid remotely operated vehicle (HROV) Nereus is a one-of-a-kind vehicle that can operate either as an autonomous, free-swimming robot to conduct wide-area surveys, or as a tethered vehicle for close-up investigation and sampling of seafloor rocks and organisms. On its maiden dive in May 2009, the vehicle successfully reached the deepest part of the world's ocean—Challenger Deep in the western Pacific Ocean. During its second expedition in October 2009, it investigated hydrothermal vents along Earth's deepest mid-ocean ridge in the Cayman Trough. In 2013, as part of the newly funded HADES project, Nereus will be used to conduct the first systematic study of life in ocean trenches—the deepest marine habitat on Earth.

©Advanced Imaging and Visualization Laboratory, Woods Hole Oceanographic Institution

I have participated in some of the most challenging expeditions ever conducted since becoming involved with ocean exploration in the late 1970s. I have been privileged to be in the company of the best and brightest scientific and engineering minds, both in the laboratory and on the rolling deck of a ship at sea.

I have seen new technologies born and seen them drift into obsolescence. I've also lived through the debate that "science drives technology." Although it's true that scientists ask questions and engineers develop tools to answer those questions, my experience has been somewhat different. Every time we put new technology in the water or try a different method, we learn something

new. Technology is truly the key to ocean exploration, but INNOVATION sets the stage for revolutionary thought. New technologies and techniques consistently lead to new questions; therefore, in the case of exploration, technology . . . and innovation . . . drive science.

Unfortunately, ocean exploration has long stagnated. Although progress has been slow and steady, most ocean science is driven by government funding, which is not exactly ideal for innovation. Government funding seeks to avoid risk, but risk is the blood brother of innovation. New technologies sit idle for years before acceptance by the "system." As a result, in the last several decades, the world experienced the explosive growth of communication and computer technologies, while the ocean science world simply plodded along.

Today, we stand at the threshold of a new era of ocean exploration and discovery; private, non-scientific entrepreneurs often provide the funding that drives the creation of new technologies and techniques. I am on the ocean advisory board of the XPrize Foundation. Their mission is to facilitate **radical breakthroughs** in science and engineering for humanity's benefit. I watched with disbelief as the Ansari XPrize shattered the idea that only NASA could put people into space; now, I watch the same process take hold for ocean exploration. The one thing I appreciate most is the knowledge that if the challenge can be properly designed, the answers can come from anywhere. Amazing. Let's not forget one thing though: there will always be a role for science. The scientific process of peer review and publication is a remarkably effective and efficient way of building a solid knowledge base. But as far as innovation goes, the floodgates will soon open, and all of humanity will benefit.



Photo by Amy Nevala, Woods Hole Oceanographic Institution. ©Advanced Imaging and Visualization Laboratory, Woods Hole Oceanographic Institution

Who Cares about the Sea?

It's important to take a step back to better understand issues inherent in exploring and understanding the sea. Otherwise, it's difficult to grasp how, in the 21st century, we live on a still mostly unexplored planet. In order to gain perspective, we need to better understand the promise and peril of oceanography. It's a departure from discussion about technological breakthroughs, but it's important to discourage the development of tools looking for problems to eliminate. If anything, ocean exploration is ripe with peril, promise, and most importantly, problems.

Oceans cover 70% of the Earth's surface. The global ocean's average depth is about 2.5 miles. The greatest depth is about 7 miles in the Challenger Deep of the Marianas Trench, Western Pacific Ocean.

I can't begin to say how many times I recited those facts in the past 36 years. Aside from getting these right on a test or with trivia, who cares? A cartoon from *The New Yorker* over my desk shows five ladies enjoying afternoon tea; one says, "I don't know why I don't care about the ocean, but I don't." In truth, most people don't. But we all should.

Why have we failed to recognize the ocean's importance to humanity?

The Indonesian tsunami, the Deep Water Horizon oil spill, the Haitian earthquake, the Fukushima disaster in Japan . . . all directly relate to the ocean floor. We could not have stopped these

events, but we could have been better prepared to respond and adapt had we known what to expect. In each case, we were surprised by the impact on humanity. Another truth is we never learned from our mistakes. If similar events happened today, we would find ourselves in the same situation. We still don't get it.

Why have we failed to recognize the ocean's importance to humanity? Maybe it's simply a matter of thinking of the ocean as "the beach." We take the oceans for granted, which is a big mistake. In the past, taking nature for granted has led to massive societal collapse.

We now know, regardless of where we live on Earth, the oceans impact the air we breathe, the food we eat, the water we drink. Every other breath we take, we can thank the oceans for that oxygen. The same goes for more than 85% of rainfall. Whether through fisheries, aquaculture, or transportation,



Tube worms living in the darkness of the ocean. ©Advanced Imaging and Visualization Laboratory, Wood Hole Oceanographic Institution

the oceans remain in the thick of it all. Beyond that, almost all the natural phenomena influencing our daily lives—floods, droughts, volcanoes, earthquakes, tsunamis, hurricanes, and typhoons—derive energy from seawater or the seafloor.

Human population exceeds 7 billion people. More than half live within the coastal zone, usually in large cities. Some 18 of the world's 20 largest cities are built on the sea itself or on estuaries adjacent to the seashore. With continued population growth, the risk to humanity from ocean-related events is higher than ever and heading steeply upward. Aside from catastrophic events, humanity is also impacted, maybe more so in the long run, by the slow but steady change in climate and weather patterns. Almost every continent is experiencing a water crisis, and predictions are ominous. Weather patterns have changed and

continue to change in an unpredictable manner. Many historical cases show when weather becomes unpredictable, societies become unstable and, in some cases, collapse.

*With rare exception,
when we eat seafood
today, we eat our
own garbage.*

Usually, this collapse is caused by the lack of a predictable fresh water supply. More than 85% of fresh water is generated by ocean evaporation. The oceans decide where, when, and how much it rains. If we can better understand how oceans store, transport, and transfer heat to the atmosphere, we can get a good jump on better

understanding climate trends. As I write this, the United States is experiencing a significant drought, with more than half the U.S. experiencing moderate to severe drought conditions. Why? Because the jet stream that normally brings storms across the U.S. is located far north over Canada. It's happening because of la Niña, a type of temperature anomaly in the equatorial Pacific Ocean. La Niña is cyclical, and it always amazes me that something starting as far away as Indonesia can decide whether it rains in my Massachusetts backyard.

Conversely, we have profound influence on the sea and life in it, whether we live on the shores of Cape Cod, in downtown Des Moines, on the steppes of Asia, or in the heartland of Africa. Human activity continues to slowly change the chemistry and temperature of seawater. Anyone who has an aquarium knows if you fiddle with the water's temperature and

chemistry, the water changes. Whatever we put in the ground—whether from farmlands, golf courses, city streets, or backyards—ends up in ground water, creeks, streams, rivers, and eventually, the sea. Over time, the oceans become a chemical soup of plastics, herbicides, pesticides, fertilizers, pharmaceuticals, and flame-retardants. There is an explosion of dead zones—huge patches of earth where nothing can live. With rare exception, when we eat seafood today, we eat our own garbage.

The same is true for what we put into the atmosphere. The ocean absorbs about 1/3 of the CO² added to the atmosphere by human activity. As a result, the seawater mixes with CO² and forms carbonic acid. Thus, the sea becomes more acidic. Ocean acidification is one of the greatest issues facing humanity because it means, globally, the chemistry of seawater will make it difficult for most young animals to form skeletons or shells. Sadly, the oceans are rapidly becoming an unpleasant place to live. To make matters worse, overfishing has caused the collapse of most large fish stock. Altogether, between the change in seawater chemistry and the practice of overfishing, it's almost as if we have decided to wage war on sea life.

Throughout history, the oceans have been both pathways and obstacles to human evolution, and those societies that knew the oceans best and used them wisely had the greatest advantage. It is clear the oceans are important to humanity. But, before we get too discouraged, we need to realize there is also "promise" in addition to the "peril." The oceans are not one big, blue fish bowl. They contain the greatest mountain range, thousands of peaks higher than the Alps, and thousands of valleys many times wider and deeper than the Grand Canyon. The oceans feature underwater lakes, underwater rivers, and even underwater waterfalls.

Almost every feature found on land can also be found beneath the sea, except there, everything is more exciting. The oceans contain untold energy reserves, precious and semi-precious metals, various ores, and an endless font of organisms with potentially huge importance to biotech. The oceans contain the clues to human origins, the history of human evolution, and the keys to our destiny.

Despite all the promise and peril, the oceans remain almost completely unexplored. It's hard to believe we have explored less than 10% of the world beneath the sea (a generous estimate). How can this be? Humanity resides in an intimate relationship—some might say a life and death relationship—with the ocean, an entity we have not begun to even explore, let alone understand. WHY?

The answer lies in a statement we already know: the oceans are vast and deep.

Seeing in the Sea

The legendary New York Yankee catcher Yogi Berra stated, "You can learn a lot by watching." Yogi was right. Observation is and has always been the cornerstone of science. In the oceans, because of their vastness and depth, observation remains critically dependent on technology. Ocean exploration is not rocket science. It is a lot more difficult.

In space, you can see forever. Literally. With telescopes, we can peer toward the edge of the universe. Beneath about 1,000 feet in the oceans, you can't see the hand in front of your face. Sunlight has never penetrated the oceans' depths. In space exploration, the change in atmospheric pressure between Earth and Mars is about 1 atmosphere (14 pounds per square foot). At the greatest ocean depth, ambient pressure is on the order of 1,200 atmospheres (17,000 pounds per square inch). In space

exploration, solar energy is abundant. In the oceans, however, power arrives through cables or batteries. In space exploration, communication can take advantage of radio waves, but radio waves do not penetrate seawater; therefore, communication must be through cable or sound. Today's familiar GPS navigation is not available in the oceans. In short, the oceans represent one of the most challenging exploration environments known. The technologies required to visit deep ocean are sophisticated. Technologies required for a longer duration remain rarer still.

The average depth of the oceans is about 13,000 feet. The deepest scuba dive recorded is in the vicinity of 1,100 feet. Clearly, since more than 92% of the ocean is deeper than maximum diver depth, advanced technology is crucial for ocean exploration.

In my experience, ocean exploration involved two major technological strands: sensors and platforms. Sensors are the technologies responsible for collecting information from the sea and can be optical (cameras), acoustic (sonar), physical (current meters), chemical (sniffers), or temperature, among other things. Platforms represent the vehicles used to carry the sensors. Platforms can be human-occupied submarines or robots.

Submarines Versus Robots

During my first oceanographic expeditions in the late 1970s, I was particularly interested in making maps of the seafloor, especially to understand the theory of continental drift. At that time, the best tool available was the submarine ALVIN, which held 3 people: a pilot and 2 scientific observers. A typical dive took 8 to 10 hours, and a typical expedition involved somewhere between 7 and 21 dives. It took approximately 2-1/2 hours for

the submarine to float to the bottom and another 2-1/2 hours to surface, a 5-hour commute for probably a 5-hour workday. On the bottom, the speed of the submarine across the seafloor was (and is) usually less than 1 mph (yes, only 1 mph), so in all, the amount of exploration accomplished from a submarine is extremely limited. In addition, when a submarine is used to explore, the experience and brainpower is confined to those 3 people in the submarine.

By the late 1980s, remotely operated vehicles (ROVs) appeared on the oceanographic scene. The great advantage of an ROV is it can stay on the bottom for days, weeks, even a month or more once lowered from the ship. Thanks to power fed to the vehicle through an armored cable and fiber-optic technologies, startlingly clear images are fed to the surface control room. Rather than 3 people crammed into a submarine with one or more robots, the control room can include the pilots of the robot(s) plus a team of scientists and engineers who can witness sea exploration many miles beneath the ship. Beyond that, with satellite technologies, the participants can have a global audience. Literally with a joystick and satellite link, it is now possible to explore the Titanic from the comfort of a laboratory, classroom, living room, or even a smartphone.

The amount of information collected by an ROV is enormous compared to that collected by a submarine. Depending on the mission, robots can be more effective and efficient because they are programmed to perform certain tasks without the necessity of pilot intervention. Like the submarine, ROVs have manipulators and can collect samples.

Given all of the above, it seems clear in the debate of robot versus submarine, the robot wins easily. Robots stay on the bottom much longer, collect more data,



The WHOI-operated research vessel Atlantis serves as support vessel for ALVIN operations. During each recovery, two certified swimmers help bring the submersible back to the ship. Photo by Amy Nevala, Woods Hole Oceanographic Institution. ©Advanced Imaging and Visualization Laboratory, Woods Hole Oceanographic Institution

take greater risks, and bring a global audience along on the mission. No contest, right? Wrong.

It's not just about collecting data while exploring; it's about what the experience does to us mentally and spiritually that makes the hassles worth it.

There is no substitution for being there. Think of a live sporting event or concert. If you watch from home, you have the available creature comforts: food, a couch, a bathroom, and awesome television coverage from multiple cameras with play-by-play by a team of experts (possibly in high-definition). On the other hand, at a live event, you are faced with the issues of getting there,

parking, finding and being crammed in your seat, and being surrounded by people. Plus, the acoustics are usually horrid, the view sometimes terrible. Despite the downside, we still go to live events. Not only do we still go, but we FIGHT for tickets to go. Beyond that, we remain willing to pay a lot of money to enjoy a less-than-pleasant physical experience. Being there allows us to *experience* something in a manner that can't be replicated. There is something about the energy of a charged stadium or concert hall, something indescribable about the *experience*, and therein lies the answer. It's not just about collecting data while exploring; it's about what the experience does to us mentally and spiritually that makes the hassles worth it.

In the last several years, a new platform emerged to make a huge difference in our ability to map and explore the deep sea: autonomous underwater vehicles (AUVs). AUVs are different because they launch from a ship then they are on their own. There is no pilot per se. Instead,

AUVs are pre-programmed at the surface to conduct tasks. At the Woods Hole Oceanographic Institution, we have several AUVs: among them, the ABE/SENTRY class capable of either precise hovering or mapping; the SEABED class, which excels at making optical mosaics of the sea floor; and the REMUS class, which made a name for itself by finding the lost airliner Air France 447 and mapping the wreck site of the Titanic. The ABE/SENTRY and SEABED class vehicles are designed for stability; the REMUS class AUVs are torpedo-shaped for speed. Now proven capable, reliable platforms, a new suite of sensors has been developed to take advantage of their capabilities.

As deep submergence platforms, submarines, ROVs, and AUVs each have strengths and weaknesses, and each spawned a new generation of sensors. Future exploration of the oceans will, in the near term, involve all three types of platforms working together and separately. The distant

future may involve some sort of new platform. In fact, the whole notion of *virtual exploration* remains to be discovered. Virtual exploration involves collecting digital data sets to recreate an underwater world that can be explored with various visualization techniques. The idea of a virtual shipwreck is very appealing, and several groups are working to that end. Anyone familiar with Xbox® or SONY Playstation® knows how powerful and detailed exploring a virtual world can be, where players simply substitute the real world for a world that lives in the mind of a game developer. Oceanographers attempt to do the same thing.

The Challenge Ahead

Although great technological successes and revolutionary discoveries have been made, the ocean exploration field remains, in a way, stagnant and fragmented. The enabling technologies of command and control, telemetry, power, propulsion, navigation, and payload still struggle to advance against the simple physics of seawater. Indeed, a lot of technology is available already, but few standards in data collection exist, as do hardly any organized plans to map, monitor, and understand the global ocean despite growing need. The setting is ripe for innovation, not just to create the components of new platforms and sensors, but to develop entirely new ways of doing things. In ocean exploration, technology gave us the ability to explore and understand our planet for the first time. Given the immediate challenges facing humanity in understanding our relationship with the sea, there couldn't be a more important time for ocean exploration.

Dr. David Gallo is an oceanographer at the Woods Hole Oceanographic Institution and was the co-expedition leader for the 2010 mapping mission to the RMS Titanic. He was a featured keynote speaker at ciWeek 2012 at the DMACC West Campus.



For more information, visit the following websites:

◀ www.who.edu



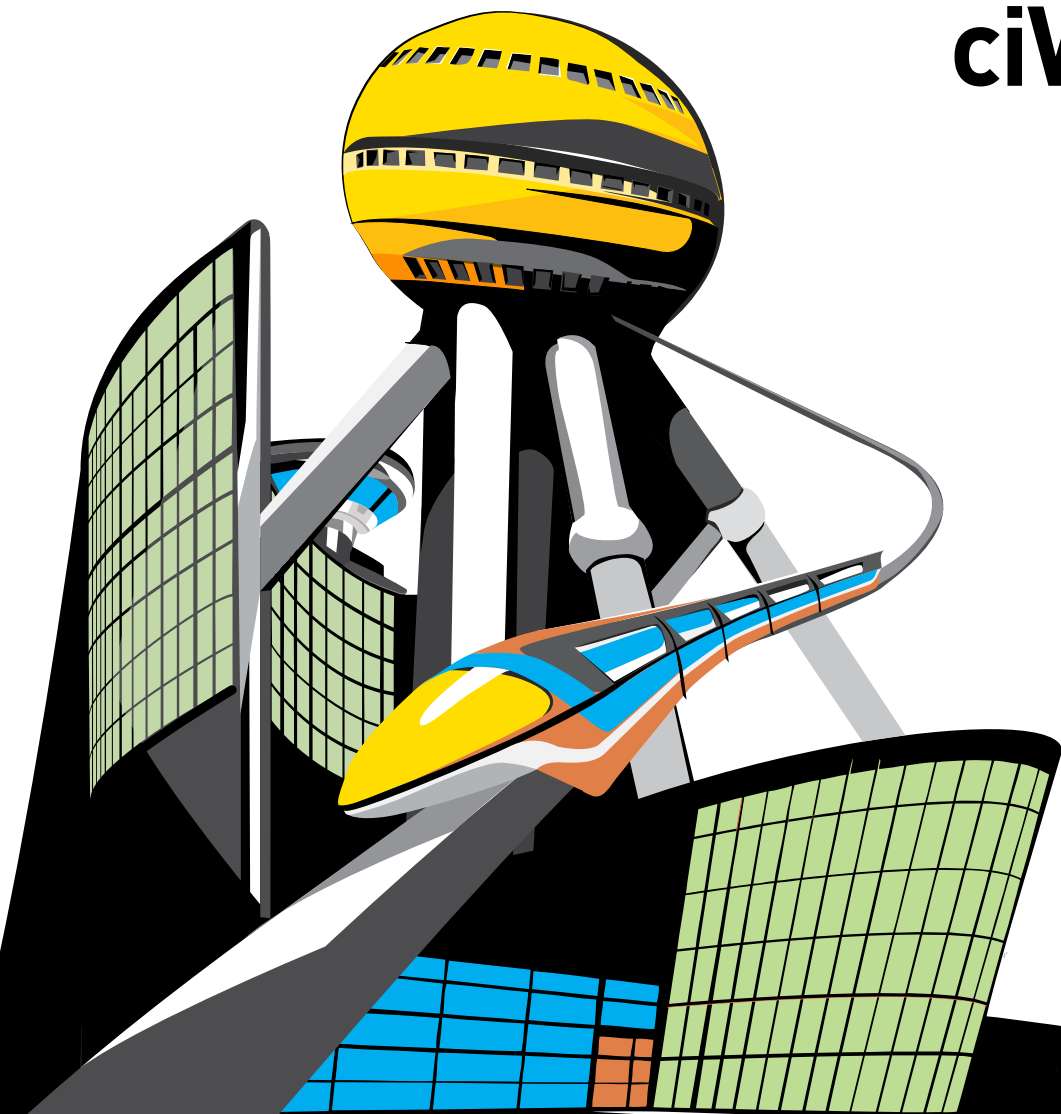
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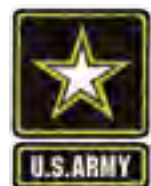
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DAYMOND JOHN

FOUNDER OF FUBU AND STAR OF ABC'S *SHARKTANK**

A young entrepreneur, industry pioneer, highly regarded marketing expert, and a man who has surpassed new heights of commercial and financial success are just a few ways people have described Daymond John. In recognition of his contributions to fashion and the face of American business, John has been celebrated with some of the most prestigious awards, including *Brandweek* Marketer of the Year and Ernst & Young's New York Entrepreneur of the Year Award for Entrepreneurship, just to name a few.

John's creative vision and strong knowledge of the marketplace created one of the most iconic fashion brands in recent years. FUBU ("For Us By Us") represented a lifestyle that was neglected by other clothing companies. In 2005, John entered the literary world with his first book, *Display of Power: How FUBU Changed a World of Fashion, Branding, and Lifestyle*, and followed up with his second book, *The Brand Within: The Power of Branding from Birth to the Boardroom*.

In 2009, John joined the cast of the ABC entrepreneurial business show *Shark Tank* produced by acclaimed TV producer Mark Burnett. As one of the "Sharks," John and four other prominent executives listen to business pitches from everyday people hoping to launch a company or product to new heights. Investing his own money in every project, John partners with the entrepreneurs to help them turn their dreams into realities.



JOHN GAETA

ACADEMY AWARD-WINNING VISUAL EFFECTS DESIGNER, *MATRIX* FILM TRILOGY*

John Gaeta is an Academy Award-winning visual effects designer best known for his work on the *Matrix* film trilogy, where he advanced the effects methods known as "Bullet Time," "Virtual Cinematography," and "Photo Anime."

Since working with the Wachowski siblings on the *Matrix* movies and *Speed Racer*, he has been experimenting with motion-sensing technology (Kinect) as a way of converging movies and interactive media into a more compelling, mind-bending, and unifying experience.



It is Gaeta's contention that while the movie industry is creatively stagnating, we are on the verge of a new renaissance of technological innovation that will transform both movies and interactive entertainment into a deeper and more subjective experience. We're talking holographic immersion with complete volumetric capture, so viewers can watch from the viewpoint of the director or select their own individual perspectives. Imagine going into the *Matrix* with Neo or being transported into the watercolor heaven of *What Dreams May Come*.

In 2009, Gaeta founded a new type of development entity called FLOAT (hybrid), and he serves as its acting Creative Officer. FLOAT innovates and prototypes compelling interfaces between audiences and many types of media including television, gaming, search, social, and augmented reality. Gaeta believes there are threads in today's most exciting technologies that are leading toward a fundamental leap in the way people interact and immerse within all media.



JESSICA O. MATTHEWS AND JULIA SILVERMAN

FOUNDERS OF UNCHARTED PLAY AND INVENTORS OF SOCKET*

In May of 2011, Jessica O. Matthews and Julia Silverman founded Uncharted Play—a new kind of social enterprise that would show the world that doing good and doing good business need not be mutually exclusive.

The Uncharted Play dream began in 2008 when Matthews and Silverman met during their junior year at Harvard College. Both studying to be social scientists with no experience in engineering, they nonetheless worked together on a class project to invent the SOCKET—a soccer ball that doubles as an eco-friendly portable generator. Through this experience, both women realized that the world of play was truly uncharted territory when it came to tangibly addressing real issues facing the masses. Though the future was uncertain, they knew that an enterprise grounded in sustainable, realistic solutions for happiness had an undeniable value.

After graduating from college, Matthews and Silverman set up shop in New York City and established an enthusiastic team to further develop the founders' core values. The SOCKET is constantly being reiterated to truly meet the needs of the end-user, and development on several other FUNCTIONAL products has already begun.

They invite everyone to join them in their mission to innovate, play, and empower.



*Keynote speaker biographies provided by speaker representation. Used with permission.

MONDAY, MARCH 4–
THURSDAY, MARCH 7, 2013

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BY ANTHONY PAUSTIAN, PH.D.

SHADES OF WHITE:

How Perspective Can Impact Innovation

As I reclined on a white, sandy beach on the shores of Key West, a light breeze came off the water; the surf lightly lapped my feet with a soft, rhythmic flow. Other than the sound of crashing waves and a few screeching gulls, the shore was peacefully quiet. What made this experience especially pleasant was the knowledge that I left the snow and blistering cold of Des Moines behind.

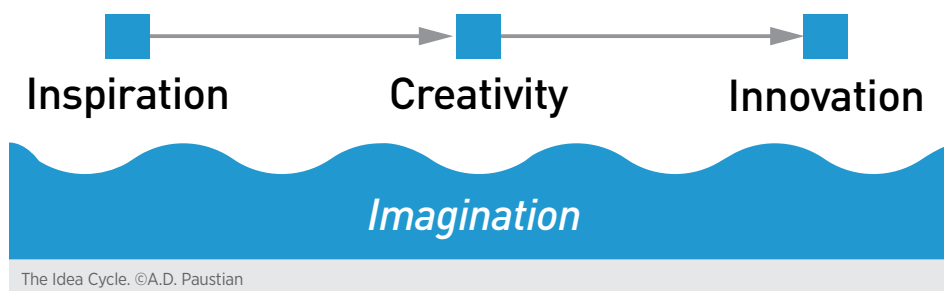


A waiter handed me an \$8.00 frozen beverage, a 12-ounce cup of what I call “banana surprise.” As I sipped my drink, a person sitting nearby mused about its price. In a somewhat boisterous tone, he insinuated some form of captive theft; he could purchase three drinks just like it back home for the same price! My response was quick, but sincere. “Perhaps,” I said, “but will they bring them to you while you sit here?”

Although technically correct, this gentleman’s argument was flawed. It lacked one important element: perspective. Perspective offers insight into the way objects relate to each other within the context of something larger—in this case, the beach at Key West. The drink (or three of them, for that matter) does not have the same attraction during January in Des Moines as it does in January on the beach at Key West, which alters the context and, hence, the price.

Perspective affects not only how individual objects relate to each other but also how they are perceived within a larger whole. We’ve watched singers become stars after succeeding on television shows like *American Idol*. Obviously, these people could sing prior to becoming contestants; however, when placed against other singers within a focused environment, perspective quickly changes.

I remember once walking through the corridors of the New York Museum of Modern Art (MoMA). As I came upon a plain white canvas appropriately entitled “White,” I stood there in awe, staring at it for about 10 minutes while thinking, “Is this a joke? How can they call this art? Why would the museum even hang this thing?” I even thought, “This artist, if that’s what you can call him, has some kind of gall.” But after a few minutes, my thoughts shifted. “What is the artist trying to say with this? Is life nothing more than a blank canvas for us to fill ourselves? Is he trying to share the emptiness in his



heart? Is there any food around here . . . I’m starting to feel a little hungry?”

I eventually realized two things: first, even though it was just a plain white canvas, I’m fairly certain everyone who looked at it perceived something different, as the white space was a container begging to be filled. Second, I spent far more time staring at that piece than any other.

The Relationship between Perspective and Innovation

In *Beware the Purple People Eaters*, I define innovation as the application of creative thinking and part of a process known as the Idea Cycle. The Idea Cycle typically begins with inspiration (motivation), moves to creativity (connection-making), and ends with innovation (application). Innovation is about making ideas useful—taking the next step to put ideas into action and add value.¹

Perspective has a powerful impact on innovation, although not always in positive ways. Perspective filters which ideas make it off our mental drawing tables, which concepts are supported by others, and which people have the right ideas to begin with.

Now You See It . . . Now You Don’t

Sometimes it’s difficult to maintain any kind of consistent perspective because of the fast-paced nature of change. In the 1970s, I was a young, inventive high school student who designed and

built a microcomputer (when the term “PC” didn’t yet exist). The specs of the computer were astounding to those who viewed it. It ran at a speedy “1” MHz, had 256 bytes of memory (not megabytes or gigabytes, just bytes), no keyboard (data input occurred through a laborious process of flipping a series of toggle switches), and no hard drive or storage of any type (since the notion of “storage” didn’t exist yet, even in the form of floppy disks). Each time the power was shut off everything was lost, and the data input process had to be repeated. The monitor consisted of an old, rewired black-and-white RCA television with big square pixels the size of a dime.

Although primitive by today’s standards, this machine was cutting-edge for its time and frequently a hit with friends and family who remained convinced I was destined to become a future millionaire. Over 30 years have passed, and we now live in a world dominated by technology. Computers touch everyone, with the impact of that touch progressing from a soft, simple handshake to a gang tackle with people piling on for good measure. New innovations appear daily, and the world sometimes seems incredibly small thanks to the Internet. Computers, in all their forms, are found in virtually everything: appliances, automobiles, toys, telephones, wristwatches, athletic shoes, vending machines, and televisions. This list doesn’t even include the countless computers that control processes such as personal gaming, washing cars, manufacturing, making Hollywood blockbusters, and communicating in general.



This is the upgraded version of the microcomputer design from 1980. Although memory had been boosted to 1000 bytes (1k) from 264 and a keyboard had replaced the rows of toggle switches, the data still had to be reentered each time the power was shut off. Photo courtesy of Anthony Paustian

The speed of change today can quickly render a new idea obsolete, and this trend does not show signs of slowing. In a 1965 issue of *Electronics Magazine*, Gordon Moore, co-founder of Intel and one of the first developers of integrated circuits and silicon chips, authored “Moore’s Law,” which states computing power and capacity will double about every 24 months (some believe the number is closer to 18 months).² If Moore’s Law continues to hold true, imagine how the speed of change will impact our perspectives, especially after today’s computing power increases an amazing 32,768 times in the next 30 or so years.

Nothing is static, and a good idea today may not seem so good tomorrow. The speed of technological change will

continue to bombard us, and it will become increasingly harder to decide which ideas to innovate. A broad perspective and clear understanding of the future will be required to see the larger perspective and make viable choices for future opportunities.

TIP: Maintain focus on your primary idea, not the technology driving it. For example, both Palm and Blackberry once dominated the handheld computer and smartphone markets, frequently redesigning and updating their products with new technologies. Today, Palm and Blackberry are non-players as Apple is now the market leader. Although the technology behind Apple’s products is state-of-the-art, what separates Apple from being just a

“technology company” is the consistent focus on the user experience and the efforts to improve it.

Mirror, Mirror

In the German fairy tale *Snow White*, the Evil Queen possesses a magical mirror that answers whatever question asked by The Queen such as, “Mirror, mirror, on the wall, Who in this land is fairest of all?” Early in the tale, the mirror always replies, “You, my queen, are fairest of all.” However, when Snow White reaches the age of seven, the mirror responds, “You, my queen, are fair; it is true. But Snow-White is a thousand times fairer than you.”³

Sometimes our perspective is like that of The Queen. We go along each day thinking we know something until, one day, we realize everything has changed. It’s not that the change necessarily occurs overnight. In nearly every context except technology, change occurs slowly and incrementally. It proceeds quietly along until the day when you suddenly become aware of it. Both The Queen and Snow White change over time, but eventually Snow White becomes the more beautiful of the two (at least from the mirror’s perspective).

Back in the late 1960s/early 1970s, a television commercial for the Playtex® Cross-Your-Heart Bra featured the product placed on a partial mannequin while a scientific-looking man in a lab coat discussed the bra’s features and “cross-your-heart” design. Throughout his description, he would carefully point to features without ever touching the mannequin or the bra to avoid offending viewers.

Today’s commercials for women’s undergarments differ radically from that era (and the undergarments are far more revealing). My guess is had the shift occurred overnight or even over a short period of time, there would have been national outcry over perceived obscenity.



People would frequently travel to see early American astronauts. In this photo, astronaut John Glenn is being honored as the first American to orbit the Earth. Photo courtesy of NASA

However, through slow, incremental changes in societal values, television programming, and behavioral norms, people today generally accept these changes. The slow nature of change in perspective over time serves to facilitate big changes.

TIP: Sometimes the best approach to facilitate large-scale change is to divide tasks into a series of small steps introduced slowly, thus reducing potential resistance or backlash. For example, Google did not exist prior to 1996, and people lived fairly private lives. Imagine the response if, suddenly that same year, names could be typed by anyone into a program called Google to find out vast amounts of personal information. Then imagine if everyone could shift to another program called Google Earth and look at the houses of neighbors, employers, strangers, and friends.

Everyone Is Welcome

Innovation can come from anyone and occur at any time or place. A perspective I frequently observe in college students is the failure to believe that the ability to create new ideas, start businesses, and achieve success using their talents is within their grasp. They have trouble seeing potential opportunities for a variety of reasons such as a lack of knowledge, funding, talent, or support. For them, seeing things from a different perspective can seem like trying to cross the grand, Grand Canyon of possibility.

Some students equate opening a math textbook today to asking a vampire to eat garlic on a crucifix spoon. Although the fastest growing career sectors are in STEM fields (science, technology, engineering, mathematics), the media is fraught with reports about the lack of students and, ultimately, graduates in

these areas. According to data released by the United States Census Bureau, a STEM-related associate's degree now pays better than a bachelor's degree in liberal arts, and men still vastly outnumber women in STEM fields, although women represent the largest growth in students overall.^{4,5}

The significant national decline in STEM-related graduates has become such a concern that even the Defense Advanced Research Projects Agency (DARPA) recognizes the harm to our national security due to the inability to maintain a technological lead in critical skills and disciplines. DARPA observes the problem often rests with "public perception" surrounding these types of careers.⁶

Perhaps the problem rests with today's cultural focus, one that seems misdirected as evidenced by a growing fascination with the tabloid exploits of celebrities,

athletes, and reality television stars. There was once a time when true innovators reigned as the rock stars of their eras. People would travel great distances to glimpse Edison's latest invention, the Wright Flyer, a Tesla experiment in electro-magnetism, or an American astronaut. World Fairs (prevalent from 1851–1960s) showcased and celebrated the world's innovations and inspired, enlightened, and entertained visitors from all walks of life. Today, even school science fairs seem scarce, or at least unavailable, to many students.

TIP: ANYONE can be both creative and innovative regardless of socio-economic status, ethnic background, gender, educational level, or age. Our country's history is replete with examples of people of all types and backgrounds who had significant impact on our lives today. Don't take "no" for an answer; seek out help (a great many successful people would love to mentor someone with the desire to succeed), and be willing to do whatever it takes to see it through. Most innovators—both past and present—are commonly described as tenacious.

Look a Little Deeper

Innovation has always been a game-changer. It determines how people communicate, travel, and manage their lives. It allows people to visit other worlds. After ushering in the Atomic Age, it provides the potential for unlimited energy. It produces food for the growing masses. It adds convenience and improves the standard of living for many. Innovation has defined this country since its inception.

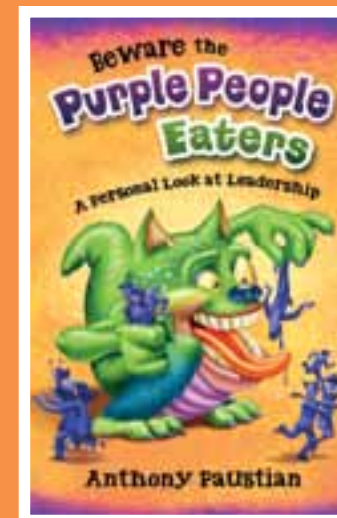
Unfortunately, however, the word "innovation" stands in danger of becoming a buzzword, like "paradigm" in the 1990s or "synergy" at the beginning of the new millennium. It appears, frequently, in corporate marketing materials, television commercials, investor pitches, even presidential speeches. People drop the

word in conversation as they mention its importance. However, the true concept of innovation is typically ignored and seldom celebrated.

Our society requires more than a buzzword to change, grow, and flourish. Without a continued focus on innovation, our country's status and share in world markets will continue to erode and decline. Innovation must be a driving force for our future. Those responsible for innovation and the spirit of their efforts should be celebrated, and their stories shared (again and again) to inspire future generations to innovative thought and action.

ANYONE can be both creative and innovative regardless of socio-economic status, ethnic background, gender, educational level, or age.

Maybe the MoMA artist had it right all along. As improvements in high-resolution 3D graphics, virtual realities, and special effects increasingly reduce the need for imagination, perhaps white canvasses should start appearing everywhere—in museums, lobbies, offices, and homes—to open our minds to a limitless world of innovative thought. Then, as we each stare into the canvas and see a different shade of white, it may be that the ideas and perspectives that ultimately emerge from the void will solve a long-standing problem, create a new social norm, or simply become the next great thing we can't live without.



Dr. Anthony Paustian is the author of *Beware the Purple People Eaters: A Personal Look at Leadership* and the Provost of the DMACC West Campus. For more information, visit his website at



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Portions of this piece were adapted from *Beware the Purple People Eaters*—©2012 by Anthony D. Paustian (BookPress Publishing).

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A seated Thomas Edison in his Menlo Park laboratory with Henry Ford (middle) and a colleague looking on. Photo courtesy of the National Park Service



BY ADAM CARROLL

THE MISSING INGREDIENT

The Magic of True Innovation

Shark Tank, a phenomenal show on ABC right now, features five very wealthy businesspeople who listen to business pitches made by entrepreneurs. The pitches last between 2-3 minutes before the “sharks” begin grilling each entrepreneur with questions about business plans, revenue models, and plans for future growth. If one (or more) of the sharks are interested in investing in the business, an offer is made to the entrepreneur who then has to decide whether to accept.



Daymond John is one of the “sharks” on ABC’s *Shark Tank*. Photo courtesy of Daymond John

The products these savvy innovators have created aren’t necessarily mind-blowing: a toilet training system for cats, magnetic collar stays, a guitar-playing-made-simple product, portable speakers, a water spigot adapter, fancy flavored teas, a sealed one-serving wine container. What is most impressive is the level to which these entrepreneurs have taken their ideas to make them a reality.

Most viewers make a comment like, “I could’ve thought of that!” And indeed, they probably could have, but thinking of something and actually seeing it through to completion are two very different things. As the saying goes, ideas are a dime a dozen. Creative people have ideas, yet those who innovate turn those ideas into products.

Which prompts these questions: Why are so many people creative, but so

few truly innovative? What ideas or values must we instill in others to help them launch their ideas faster and more efficiently? What is the magic ingredient behind having a great idea, which then can be transformed into a truly innovative product?

Ingredients used by every innovator—persistence, creativity, hard work, resourcefulness, research—might top most people’s lists. But you must look no further than one of the most prolific inventors on Earth to discover a secret ingredient. In the book *Innovate Like Edison*, Michael Gelb identifies one of Thomas Edison’s core innovative elements: tapping the intellect of others. Today we might think of Edison as a “super-connector,” someone who always masterminds with the best and brightest thinkers for maximum innovation AND output. Gelb states,

Beyond the world of beakers and test tubes, Edison realized the importance of maintaining a vibrant connection with the diverse constituencies fueling his innovation empire. He cultivated relationships with people from a broad spectrum of disciplines, including technical experts, customers and prospects, journalists, academics, financiers, and politicians.¹

Gelb explains that Edison surrounded himself with famous innovators like Henry Ford (inventor of the assembly line) and Alexandre-Gustave Eiffel (architect of the Eiffel Tower) and engaged with intellectuals like Charles Darwin, Sigmund Freud, Mohandas Gandhi, Marie Curie, and Albert Einstein. Everyone around Edison had an enormous impact, and he recognized the value of their input to the innovative process.

While it might not be possible to highlight how the innovators on *Shark Tank* arrive at their products (each entrepreneur gets less than 10 minutes of airtime), chances are very high that they leveraged the skill sets of those closest to them in order to make the product happen in the first place. They took a creative idea and infused the idea with magic: the skills, abilities, knowledge, and connections of those around them to create something extraordinary. (Assuming you can call a cat using a toilet as such.) Yes, you could probably make a tea mixture that’s just as good as the one pitched on *Shark Tank*, but could you then get it mass-produced, packaged, and distributed? Probably not without tapping into the expertise of several others.

The point is they didn’t do it alone, and neither should you.

Your objective, if innovation is the goal, is to build a network of people as supportive of you as you are of them. The currency these relationships exchange is called social capital. Every



From left to right: Henry Ford, Thomas Edison, John Burroughs, and Harvey Firestone. Photo courtesy of the National Park Service

one of your contacts has an account that’s either filled, partially full, or empty. Want to increase your social capital with others? Help them accomplish their goals. Then they’ll help you accomplish goals when you’re in need.

The simplest way to describe how to do this is to leverage Networking P.O.W.E.R. When networking with others, simply Promote Opportunities While Establishing Relationships (P.O.W.E.R.):

- ✓ When a new contact says she would someday like to write a book, provide her with the resources in your network to accomplish the goal.
- ✓ Know someone who wants to travel overseas? Direct him to couchsurfing.com or AirBNB.com, or introduce him to someone who just returned from such a trip.

- ✓ If a new contact dreams of working for a Big 4 accounting firm, provide the introduction to that college friend of yours who is a higher-up in Chicago.
- ✓ Know someone looking to start an online business? Suggest he read your favorite book on the topic or subscribe to Mixergy.com podcasts.

All of these are opportunities that you could be promoting to build social capital.

The impact of this new currency should not be underestimated. In our current economic environment, money—or a lack of money—can be the main reason *not* to pursue an idea. Yet with enough social capital, money or its lack may never be an obstacle. You’ll instead rely on favors, partnerships, or bartering to get the job done.

Crowd-sourcing sites have manifested the ability to leverage social capital into real capital to get projects funded. Artists, musicians, inventors, filmmakers, and people who need surgery or want to adopt a baby post videos describing their needs on sites like kickstarter.com, indiegogo.com, and fundly.com; many of them will raise more than what was originally requested. Want proof? In 2012, Kickstarter.com will fund more projects than the National Endowment for the Arts.²

Before you can figure out how to grow social capital, remember the opportunities you promote must be done selflessly. To activate the Law of Reciprocity (a powerful universal law that suggests givers get), the work that you do helping others must be done without worry or anticipation of payback. In the words of the famous

motivational speaker Zig Ziglar, “You can get everything in life you want if you will just help enough other people get what they want.”³

Begin surrounding yourself with idea people who also connect to others. When enjoying coffee or lunch with someone you admire, ask as many questions as you can to discover the person’s goals and dreams. (A good maxim: focus on listening 70% and talking 30% of the time.) Find out if the person has discovered the next big idea or a project that needs help to be launched. Then leverage Networking P.O.W.E.R. to promote opportunities, which will help someone else achieve a desired breakthrough, whether that be a contact, a book, a website, or another resource.

The power resides in the network.

In time, you’ll discover you’ve built a very substantial network. The people you’ve been assisting are the ones you will likely turn to for your own project—which might be in need of connections or resources—to help you realize the next great idea. Because you’ve grown your social capital, others are more likely to offer their assistance.

Think of it this way—now that Google can access millions of pieces of information that exactly match your search, why would you ever crack open the 1988 version of *Encyclopedia Britannica*? Today, even some librarians are likely to begin a search with Google. Build enough social capital, and you’ll simply Google your network when faced with a seemingly insurmountable obstacle.

Ask the sharks on *Shark Tank* how they would get a product on shelves or sell a million widgets, and they’ll no doubt tell you they know an expert. More than

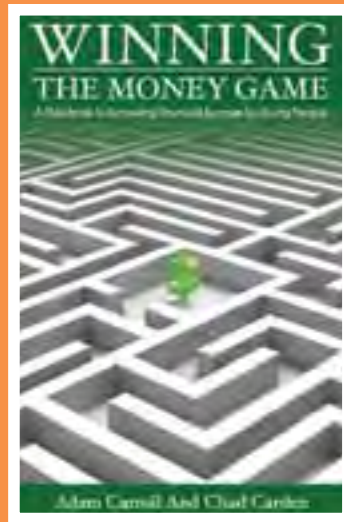
likely, they can put the ball in motion with one phone call (one of the reasons entrepreneurs clamor to get on the show). If an entrepreneur partners with a shark, the chances of success go up exponentially compared to doing it alone. The power resides in the network.

Robert Kiyosaki, author of the *Rich Dad* series of books, has been quoted as saying, “The poor and middle class look for work, while the rich build networks.”⁴

The missing ingredient of innovation is simple—it is people. Your ideas and those of others have value, but only to the extent the ideas are shared, grown, adapted, and executed. To do that, it takes the input of other great thinkers in and out of your network. It’s best to err on the side of collaboration. Like Edison, we must build mastermind networks with a diverse group of professionals, share resources and ideas willingly, and remain open to support those in pursuit of worthy goals.

Great ideas are rarely born in a vacuum, but instead come from interactions and conversations with others. Similarly, great innovations are never achieved by locking yourself alone in a workshop. Edison’s Menlo Park was always a beehive of activity, and he prided himself with the caliber of his associates, much like the sharks on *Shark Tank*.

How innovative is your network?



Adam Carroll is the author of *Winning the Money Game* and the founder of National Financial Educators. For more information, visit his website at



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EDITOR’S NOTE: Daymond John, one of the sharks from ABC’s *Shark Tank* will be a featured keynote at ciWeek 2013. Adam Carroll will also be a featured speaker at ciWeek 2013. For more information visit the ciWeek website at



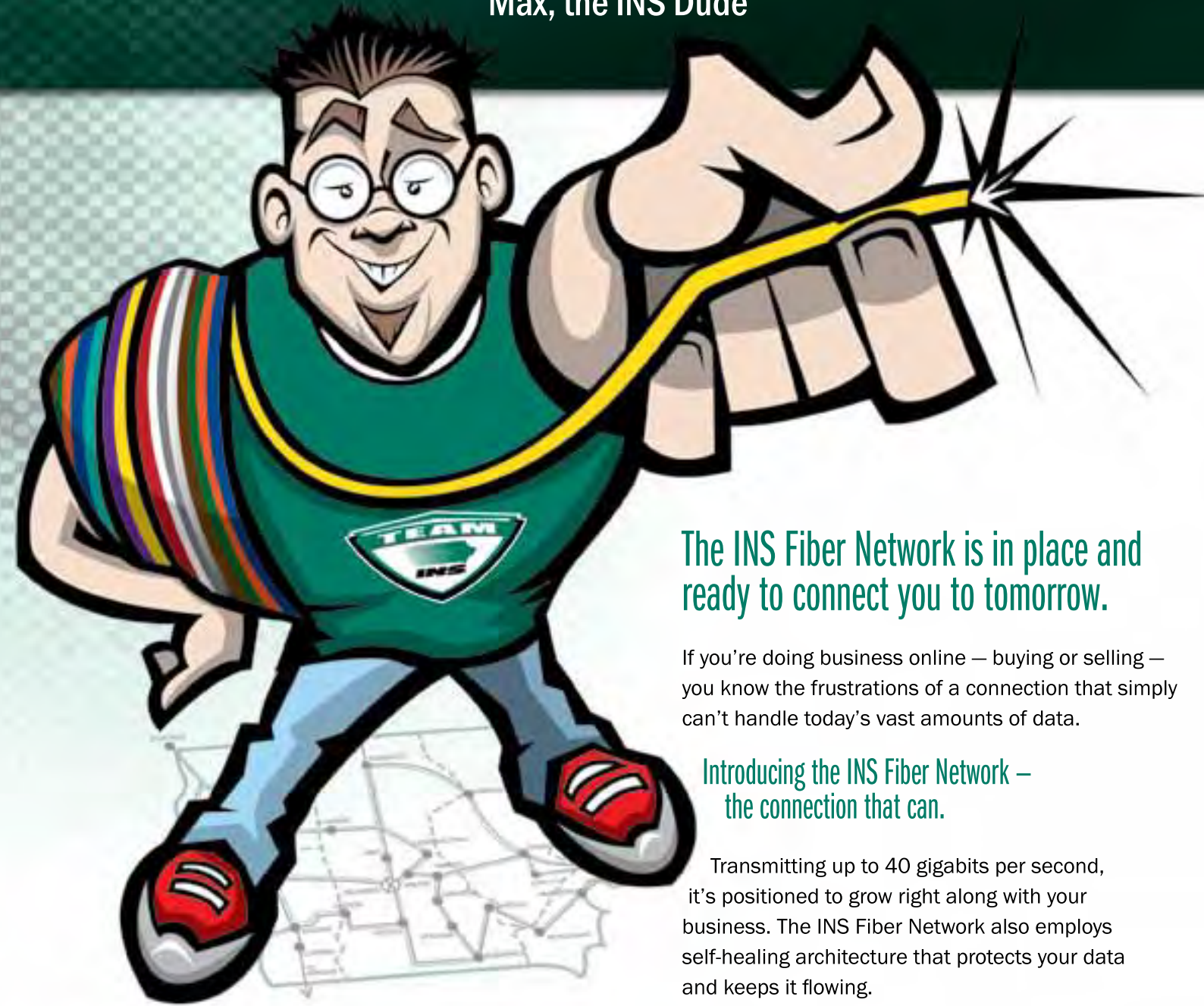
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Richard Fosbury at the 1968 Olympics using his new "flop" method of high jumping. Photo courtesy of Flickr and Olympic.org

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BY MITCH MATTHEWS

INNOVATION IS GREAT ...

But Where Do You Start?

As I work with organizations that desire to dream bigger, innovate consistently, and achieve more, I'll almost always have an exasperated leader ask, "Where do we start?" Maybe that person is overwhelmed by busy schedules and tight budgets. Maybe it's a misperception that innovation is only for companies like Apple or leaders like Richard Branson. Usually, when leaders ask this question, it seems inspired by a belief that innovation is something far off, something nice to think about but difficult to achieve in "real life." But opportunities to innovate are much closer than you might think.



High jump using an early model mat for landings. Photo courtesy of Mile Split

Look for the Mat

My response to the question is typically, “Well, look for the mat.” That phrase gets quizzical looks but also inspires people to lean in as I explain what I mean.

But first, I must tell Richard Fosbury’s story. A tall, uncoordinated kid who grew up in the Northwest, Fosbury attended high school in Medford, Oregon during the 1960s, where he went out for track during his sophomore year. Since he was already over six feet, coaches directed Fosbury to the high jump. Things didn’t go well at first.

As it turned out, the two dominant jumping styles of the day were the straddle method and the upright-scissors method. Both techniques were complicated and demanded high-level coordination. Both common strategies, each allowed a greater chance for the athlete to land with correct foot placement after the jump. Landing on the feet was critical because, after

clearing the jump, the athlete would land in a pile of wood chips or sawdust.

When Fosbury first tried the high jump, he struggled with both methods, and neither went well. In fact, his first year, he failed to complete jumps of 5 feet, the minimum height qualification at that time for most high school track meets in that region.

To find success, Fosbury experimented with a completely different style of clearing the bar. As his strategy evolved, he would leave the ground, turn, and go over the bar backward. At first, this series of moves was not graceful or effective. In fact, some of Fosbury’s coaches asked him to stop; they were overheard saying it looked like he was having a “seizure in the air.” But over time, Fosbury stayed with this technique, only to begin to win his high school meets and set new records.

He later attended Oregon State University and won the 1968 NCAA title

using his new method of clearing the bar. He went on to earn a place on the 1968 Olympic team and represented the United States in Mexico City. At the 1968 Olympics, Fosbury was the only high jumper to use this new style of going over the bar backward. In fact, some witnesses say the first time he jumped, the stadium’s packed crowd sat in stunned silence. But the audience got behind his unique approach, and when he cleared the bar for a second time, they reacted with a universal “Ole!”

Fosbury earned a gold medal and set a new world record. The “Fosbury Flop” soon became the standard for the high jump around the world. Just four years later, over half the high jumpers in the Munich Olympics used Fosbury’s technique. It has since become the standard.

A Small but Significant Change

I love Fosbury’s story because it involves a tall geek making good. I love the story because it’s truly one of the greatest Olympic stories of all time. I love the story because it involves someone trying something new in the face of adversity and mocking. And I love that Fosbury’s willingness to be different paid off. But the biggest reason I love the story is because we can all learn from what Richard Fosbury accomplished.

However, Fosbury’s accomplishments were prompted by a small but significant change. I’ve dug into this change, yet I haven’t found what caused it. Maybe a protective parent or a concerned coach. It might have been a cautious administrator. Frankly, I’m not sure. But what happened—the small but significant change—began because the pit of saw dust or wood chips used for high-jump landings was replaced by a mat. That’s right. In the mid-1960s, the pile of sawdust used previously by high jumpers was replaced by a gymnastics-



High jump using a saw dust pit for landings. Photo courtesy of Mile Split

style mat. That mat allowed Fosbury to experiment with his new technique, one that would have broken his neck if he’d tried it while landing in a pile of sawdust.

What’s interesting is this change occurred at almost every high school track across the nation during this time. In fact, the evolution from wood chips to soft mats made its way around the world. The increased safety the mats offered was available to almost everyone, but Fosbury was the only one to take advantage of it.

Why?

After encountering Fosbury’s story, I wondered, if everyone had access to these mats, why wouldn’t everyone start to adapt their techniques? Since it was no longer necessary to land on the feet, why wouldn’t everyone start to change strategy?

A few summers ago, I developed an answer to these questions as I met with

one of Fosbury’s contemporaries. This man was a high jumper at the same time as Fosbury, and he even tried out for the 1968 Olympic team.

I met him as he was getting ready to coach a summer track program of elementary and junior high students. As we sat under a shade tree protected from the hot July sun, I asked him about his experiences in high school and college track in the 1960s, and I asked him about his own preparation for the Olympic trials. I’ll be honest; I had 100 questions to ask, but one key question took precedence: “What did you think the first time you saw the mat below that high jump bar?” When I finally asked the question, his response came so fast it seemed to startle him. It stunned me.

He said, “I hated that mat.”

My surprise must have shown on my face because he quickly collected himself. I followed up: “Why?”

He replied, “Well, the minute I saw that mat, I thought to myself, ‘Great. Now everyone can do the high jump.’”

As we dug into his response further, he began to recognize his early frustration blinded him to the opportunity the mat provided. Even though the chance to improve had been right in front of him, his aggravation with the change to his sport prevented him from seeing the potential benefits the change could provide.

Where Is Your Mat?

As I talk with others about this reaction, we all think of times when we’ve been blinded by our frustration. We identify with Richard’s contemporary who didn’t adapt . . . who didn’t innovate.

What if you took this cautionary tale and used it to inspire yourself, your team, and your organization to look for the “mats” that might exist today?

Because when we do that . . . innovation can begin.

Let me offer a couple of examples.

Recently, I met Bill Price, the former Global Vice-President of Customer Service at Amazon. As I heard him tell war stories of life at Amazon and their approach to customer service, I was struck by how Amazon seemed to be an organization dedicated to finding “mats.” In fact, Price said, “My goal as V.P. of Customer Service was to eliminate the need for customer service.” He went on to explain the function of customer service in most organizations is to deal with crisis and calm irritated customers. He said, “Our job was to be detectives,” and continued, “Every customer service issue represented a hidden opportunity.” Specifically, he would equip his customer service agents with a singular question

to use when dealing with a problem: “How could the need for customer service be eliminated here?”

Price recognized the value of that particular question; it helped Amazon discover bad vendors, identify problems with their website, find hot products buyers hadn't yet found, and uncover trends in a market that Amazon took advantage of time and time again. In the end he said, "While most organizations just want to patch up problems and move on . . . Our relentless pursuit to eliminate the need for customer service helped Amazon to discover some of its most important breakthroughs."

That's what I call looking for the mat.

Closer to Home

I recently worked with a leadership team from a large insurance organization. As the subject of "looking for your mat" came up, I asked two questions:

What is frustrating you right now?

What opportunity might exist in that frustration?

I let teams of group members discuss the questions, but before they shared their ideas, I offered a word of cautionary encouragement: "Listen, sometimes when we begin the process of innovation . . . sometimes when we start to talk about possible 'mats,' we have to take some risks. Sometimes, those risks involve admitting to seeing something that you may feel like you should have seen before. Maybe those risks are acknowledging that you could have done something sooner. But those feelings of potential doubt or embarrassment can get in the way of true and effective innovation. So I just want to say that this is a safe place to dig in and look for those opportunities . . . even if we feel like we should have seen them before."

I could almost feel the level of anxiety drop in the room.

Next I said, "Okay . . . who has some ideas?" Hands shot up.

One leader I will never forget said, "As you can imagine, the recent changes at the national level around health care have been truly frustrating for our customers. And I'll admit that they aren't always nice as they voice their frustrations to us. In fact, sometimes they get pretty frustrated with my team . . . which makes my team pretty frustrated. So then it can very easily escalate into a feeling of 'us versus them.' And that's never healthy. As we talked as a team, we realized that this is an opportunity to be on the same side of the table as our customers and work together to navigate these changes . . . instead of feeling like we're on opposite sides of the table."

From that discussion, that leader and her team were able to launch an innovative education initiative that helped her organization's customers navigate the changes. Most importantly, the discussion enabled everyone to move from an "us versus them" mindset to a "let's face this together" approach.

As you can imagine, finding that "mat" changed everything.

How about You?

What might be your "mats"? Where might your opportunities to innovate be hiding? Maybe they are hidden right out in the open like Fosbury's mat. Maybe they are hidden in some of the very things that create frustration for you, your employees, and your customers or clients.

Maybe you can start to innovate with two simple questions:

What are some things that cause my clients, customers, and me frustration?

What opportunities might exist in these situations?

Then walk toward the mat.

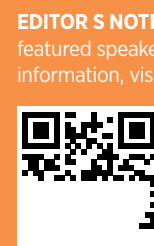


Mitch Matthews is the author of *IGNITE!* and an inspirational speaker and coach who helps people dream bigger. For more information, visit his website at



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EDITOR'S NOTE: Mitch Matthews will be a featured speaker at ciWeek 2013. For more information, visit the ciWeek website at

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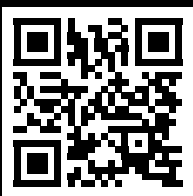
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