

Science-USA (Boston+), November 2012

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swissnex Boston welcomes you to the 2nd edition of the monthly newsletter *Science-USA (Boston+)*. This electronic publication is designed to report on trends in education, research, innovation and art. Created for busy people in Switzerland, the newsletter will consist of two spotlights on outstanding Swiss talents and a concise overview of the developments in the science and innovation industries on the US East Coast. Additionally, we will provide you with a taste of swissnex Boston activities throughout the year.

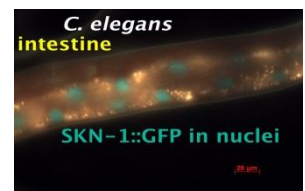
Swiss Spotlight

Scientist: Slow ageing by boosting up protective mechanisms

(Collin Ewald, November 01, 2012)

Collin Ewald is an alumnus of the University of Basel and currently a postdoctoral fellow supported by a Swiss National Science Foundation fellowship working in the Blackwell lab at the Joslin Diabetes Center. Recently, the Blackwell lab has identified a transcription factor (SKN-1/Nrf1,2,3) that plays a major role in proper protein homeostasis and prevention of reactive oxygen species (ROS) accumulation. During aging proper protein homeostasis and prevention of ROS accumulation are lost. Further, loss of protein homeostasis and ROS accumulation are hallmarks of various age-dependent neurodegenerative diseases, such as Alzheimer's disease. The Blackwell lab found a novel molecular link protecting against those two age-related hallmarks, meaning that aging could be slowed by boosting up protective mechanisms via this transcription factor SKN-1. Collin Ewald expects to gain knowledge and ideas for biological regulatory mechanisms that could potentially lead to therapeutic strategies applicable to human chronic diseases and even aging.

<http://swissinnovation.org/newsUS/web/2012/00-121101-ac.html>



Startup: Scandit – Quality mobile commerce, payment, enterprise solutions

(Samuel Mueller CEO, Scandit, November 02, 2012)

Scandit is a leading platform to connect consumers with everyday products through mobile phones. With its best-in-class barcode scanning technology, product data and analytics services, Scandit enables developers to build quality mobile commerce, payment and enterprise solutions. Endorsed by the global barcode standardization organization as its preferred technology and used by hundreds of companies worldwide, Scandit is the choice for millions of users around the globe. Scandit was founded in 2009 by entrepreneurs and former researchers at MIT and ETH Zurich, is privately funded and has won a multitude of entrepreneurship accolades. Headquartered in Zurich, with sales presences in Boston and San Francisco, Scandit was among the 20 Swiss startups selected for the venture leader program 2010 in Boston and, most recently, won the G-Startup competition at this year's Global Mobile Internet Conference.

<http://swissinnovation.org/newsUS/web/2012/00-121102-fc.html>



swissnex Boston Events

Swiss-based European Flagship project "Guardian Angels"

(yourswissnexboston, November 08, 2012)

swissnex Boston hosted In The Quest For Zero Power, a scientific workshop bringing together the European Flagship project Guardian Angels (GA), the non-profit One Mind For Research and the local scientific community. The "Guardian Angels for a Smarter Life" (GA) was selected as one of the six Pan-European FET Flagship Pilot Actions by the European Union in May 2011. The GA project is developing smart, autonomous and energy-efficient systems defined as wearable, miniaturized, non-invasive devices. The bio-inspired sensors are designed to accurately and robustly monitor physical and physiological parameters in humans. Led by the Swiss Federal Institutes of Technologies in Lausanne and Zurich (EPFL and ETH), the GA research project involves over 65 academic and industrial partners in 16 European countries.

<http://swissinnovation.org/newsUS/web/2012/00-121108-27.html>



An evening of Swiss-German literature

(yourswissnexboston, November 08, 2012)

swissnex Boston was delighted to host Swiss author Christoph Simon and Donal McLaughlin who translated Christoph's latest novel Zbinden's Progress (Original title: Spaziergänger Zbinden). The main character in the novel is an elderly retired teacher who finds himself in a retirement home in Berne. Throughout his life, he has been fond of walking, side by side with his beloved wife Emilie who had passed away. Zbinden tells his story to Kazim, a young Turkish born man who is doing his community service in the retirement home. An amazed audience discussed philosophical themes, ageing, walking and coming to terms with losing a loved one.

<http://swissinnovation.org/newsUS/web/2012/00-121108-7e.html>

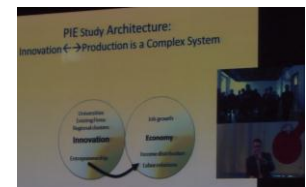


How to produce in an innovation economy?

(yourswissnexboston, November 15, 2012)

Swiss MIT Professor Olivier de Weck shares his vision. – Redeveloping manufacturing facilities in the US was one of the hot questions of the presidential campaign. Beyond the US, most of the western economies are thinking about new ways to link manufacturing and innovation, in a time of economic downturn. Around the same topic MIT has launched a two-year initiative "Production in an Innovation Economy" in 2011 to understand how strengths in innovation can be scaled up into new productive capabilities. Olivier de Weck, Executive Director of the PIE Commission (and Professor of Engineering Systems and Aeronautics/Astronautics) accepted the invitation of the Swiss Creative Center in Neuchatel to present the first outcome of the research conducted by the MIT PIE in a videoconference from swissnex Boston

<http://swissinnovation.org/newsUS/web/2012/00-121115-ad.html>



>> More past events at swissnex Boston:

<http://www.yourswissnexboston.org/>

1. Policy

Hightech Entrepreneur Pathways initiative

(The Boston Globe, November 29, 2012)

The Obama administration's top immigration official says his agency is working to attract and keep more foreign-born high-tech entrepreneurs who are seeking to start companies in the United States, a move he hopes will help the nation retain its edge in an increasingly competitive global economy. A new website provides entrepreneurs an easier way to navigate their immigration options under the so-called Entrepreneur Pathways initiative. The measure is the first product of the unusual "Entrepreneurs in Residence" program under which the immigration agency recruited five entrepreneurs who reviewed the system and proposed changes to make it easier for investors to figure out their immigration options and communicate with the agency.

<http://swissinnovation.org/newsUS/web/2012/11-121129-69.html>



More visas needed for immigrant entrepreneurs

(The Boston Globe, November 04, 2012)

From the perspective of entrepreneurs and recent graduates, the process of getting a visa is slow, expensive, time-consuming, and often unsuccessful. Even though according to the National Chamber Foundation immigrants are 30 percent more likely to start a business than US natives. Many members of the House and Senate, both Democrat and Republican agree that to keep the economy growing, it is needed to grant more visas to entrepreneurs, and people who have earned advanced degrees in STEM fields (science, technology, engineering, and math) from American universities. Legislation like the StartUp Visa Act and Startup Act 2.0 has been introduced in Congress, with support from Massachusetts senators John Kerry and Scott Brown. But neither bill has made it out of committee.

<http://swissinnovation.org/newsUS/web/2012/01-121104-7a.html>

Need for more international flights

(The Boston Globe, November 13, 2012)

The Massachusetts Port Authority faces several major challenges over the next few years, including adding international routes out of Logan Airport, modernizing port facilities to accommodate larger cargo ships, and developing the East Boston waterfront. One main focus is on more nonstop connections to overseas markets in Asia, Latin America, and the Middle East, including Israel and the Persian Gulf, all regions with significant or growing business connections to Massachusetts. Central America is seen as a prime contender for the next international route. This could prove vital to Greater Boston's economy, which has become increasingly tied to the global economy for markets, investment, and talent.

<http://swissinnovation.org/newsUS/web/2012/01-121113-66.html>

Federal funding for medical research at risk

(The Boston Globe, November 21, 2012)

Massachusetts' hospitals and research universities, twin pillars of the state economy, face a double-barreled threat from looming cuts in federal funding if lawmakers do not compromise on a plan to curb the national debt by the end of the year. Massachusetts receives more than \$3 billion a year in medical research funding, more per capita than any other state, making it unusually vulnerable to the impending cuts. The prospect of sequestration has ignited a fresh flurry of lobbying that has university presidents and hospital executives firing off letters to the state's congressional delegation, pleading that research be insulated from across-the-board cuts.

<http://swissinnovation.org/newsUS/web/2012/01-121121-a7.html>

2. Education

Record number of high school and bachelor degrees in the US

(The New York Times, November 05, 2012)

Record numbers of young Americans are completing high school, going to college and finishing college, according to a Pew Research Center analysis of newly available census data. This year, for the first time, a third of the nation's 25- to 29-year-olds have earned at least a bachelor's degree. Further, this year 90 percent were high school graduates, up from 78 percent in 1971. And 63 percent have completed some college work, up from 34 percent in 1971. The study attributed the increase both to the recession and a sluggish jobs recovery, which led many young people to see higher education as their best option, and to changed attitudes about the importance of a college education.

<http://swissinnovation.org/newsUS/web/2012/02-121105-0c.html>

Community colleges supplement with online MIT course

(The Boston Globe, November 18, 2012)

The fast-moving world of online education, where anyone can take classes at a world-famous university, is making a new foray into the community college system, with a personal twist. Beginning next term, Bunker Hill and MassBay community colleges will offer versions of an online MIT course that will be supplemented with on-campus classes. Those classes, to be taught by instructors at the two-year schools, will give students a chance to review the online material and receive personal help. Students will pay the same amount they would for a standard class. Bringing that approach to community colleges, which are seen as crucial to developing a strong workforce, seemed a natural extension of online classes at major research universities.

<http://swissinnovation.org/newsUS/web/2012/02-121118-8b.html>

New uniform calculation for high school graduation rates

(The Boston Globe, November 26, 2012)

Massachusetts failed to crack the top 10 for the best high school graduation rates in the nation and also had among the lowest rates in New England, according to data released by the US Education Department that for the first time provides a uniform calculation for graduation rates. Previously, states reported graduation rates using their own methodology to the US Department of Education – a situation that made it impossible to accurately compare rates between the states. The US Education Department is mandating that graduation rates — calculated under its methodology — become a key element of accountability systems across the nation. Paul Reville, Massachusetts secretary of education, cautioned that the federal data still does not provide a complete apples-to-apples comparison, noting that standards to earn a diploma can still vary greatly among the 50 states.

<http://swissinnovation.org/newsUS/web/2012/02-121126-e1.html>

3. Life Science

Multivitamins don't prevent heart disease

(The Boston Globe, November 05, 2012)

A study, conducted by Brigham and Women's Hospital, involved nearly 15,000 male physicians over age 50 who were randomly assigned to take a Centrum Silver multivitamin or a placebo for an average of 11 years. The researchers found that multivitamins offered no protection against heart attacks, strokes, or deaths from heart disease. Megadoses of individual nutrients such as vitamin E and beta carotene have previously been shown to offer no protection against heart disease, and the latest finding underscores the importance of looking elsewhere to reduce the most common cause of American deaths. Heart disease can be an inevitable part of aging but making a lifetime commitment to eating right and exercising can delay the onset of this disease.

<http://swissinnovation.org/newsUS/web/2012/03-121105-06.html>

Man climbs 102 floor skyscraper with bionic leg

(The Big Story, November 05, 2012)

The metal on Zac Vawter bionic leg gleamed as he climbed 103 floors of Chicago's iconic Willis Tower, becoming the first person ever to complete the task wearing a mind-controlled prosthetic limb. The robotic leg is designed to respond to electrical impulses from muscles in his hamstring. The computerized prosthetic limb, like something from a sci-fi film, weighs about 10 pounds and holds two motors. When Vawter thought about climbing the stairs, the motors, belts and chains in his leg synchronized the movements of its ankle and knee.

<http://swissinnovation.org/newsUS/web/2012/03-121105-48.html>



Diligent young researcher retracts his first publication

(The Boston Globe, November 05, 2012)

At 17, Nathan Georgette published his first scientific paper, in the Internet Journal of Epidemiology. While taking a course about ordinary and partial differential equations at Harvard University, where he is a senior studying applied mathematics, Georgette realized he had made a crucial mistake in his calculations in his research for the paper. The approach “was fundamentally flawed,” he said, and after contacting the editorial board of the Journal of Epidemiology, Georgette retracted the paper. Errors are part of science, but many researchers are not as diligent about setting the record straight, said the cofounder of a blog that tracks retractions of scientific papers.

<http://swissinnovation.org/newsUS/web/2012/03-121105-85.html>



Cambridge pharma and research pool attracts newcomers

(The Boston Globe, November 08, 2012)

Human Metabolome Technologies, a Japanese biotechnology company based in Tsuruoka, Japan, currently has 50 employees in two Japanese offices. Human Metabolome is opening its first US location in Cambridge they chose Cambridge to gain access to the area's many pharmaceutical companies and research institutions. The Kendall Square site, which includes laboratory space, has just one employee now, but the company said it expects to hire 20 by 2015.

<http://swissinnovation.org/newsUS/web/2012/03-121108-7b.html>



Mutated gene increases Alzheimer's risk

(The Boston Globe, November 15, 2012)

Two groups of researchers working from entirely different starting points have converged on a mutated gene involved in another aspect of Alzheimer's disease: the immune system's role in protecting against the disease. The mutation is suspected of interfering with the brain's ability to prevent the buildup of plaque. The discovery, researchers say, provides clues to how and why the disease progresses. The gene, known as TREM2, is only the second found to increase Alzheimer's risk substantially in older people. People with the mutated gene have a threefold to fivefold increase in the likelihood of developing Alzheimer's disease in old age.

<http://swissinnovation.org/newsUS/web/2012/03-121115-f6.html>

Breast cancer "overdiagnosis"

(The Boston Globe, November 21, 2012)

Researchers estimated that mammograms caused more than 1 million American women over the past three decades to be diagnosed with early-stage breast cancers that would not have proved fatal if left undetected and untreated - a controversial finding sure to provoke more heated debate over the benefits of the screenings. In 2008 alone, the researchers estimated, breast cancer was overdiagnosed in more than 70,000 women, accounting for nearly one-third of all breast cancers diagnosed. But getting to this conclusion involved a lot of tricky calculations, such as accounting for the routine use of hormone replacement therapy in the 1980s and 1990s, which studies have shown contributed to an increased rate of breast cancers.

<http://swissinnovation.org/newsUS/web/2012/03-121121-8c.html>

Birth control pills over the counter

(The Salt Lake Tribune, November 21, 2012)

No prescription or doctor's exam needed: The nation's largest group of obstetricians and gynecologists says birth control pills should be sold over the counter, like condoms. Half of the nation's pregnancies every year are unintended, a rate that hasn't changed in 20 years — and easier access to birth control pills could help, said Dr. Kavita Nanda, an OB/GYN who co-authored the opinion for the doctors group. Many women have trouble affording a doctor's visit, or getting an appointment in time when their pills are running low which can lead to skipped doses. But no one expects the pill to be sold without a prescription any time soon. Plus there are big questions about what such a move would mean for many women's wallets if it were no longer covered by insurance.



<http://swissinnovation.org/newsUS/web/2012/03-121121-f7.html>

5% fewer abortions during recession

(TIMES U.S., November 21, 2012)

U.S. abortions fell 5 percent during the recession and its aftermath in the biggest one-year decrease in at least a decade, perhaps because women are more careful to use birth control when times are tough, researchers say. Abortions have been dropping slightly over much of the past decade. But before this latest report, they seemed to have pretty much leveled off. You might think a bad economy would lead to more abortions by women who are struggling. However, John Santelli, a Columbia University professor of population and family health, said: "The economy seems to be having a fundamental effect on pregnancies, not abortions."

<http://swissinnovation.org/newsUS/web/2012/03-121121-4c.html>

Universities bring scientific discoveries to companies

(The New York Times, November 26, 2012)

Dr. Robert Langer, 64, knows how. Since the 1980s, his Langer Lab at the Massachusetts Institute of Technology has spun out companies whose products treat cancer, diabetes, heart disease and schizophrenia, among other diseases, and even thicken hair. Without this kind of technology transfer, the thinking goes, scientific discoveries might well sit on the shelf, stifling innovation. A chemical engineer by training, Dr. Langer has helped start 25 companies and has 811 patents, issued or pending, to his name. Over the last 30 years, many universities — including MIT — have set up licensing offices that oversee the transfer of scientific discoveries to companies. These offices have become a major pathway for universities seeking to put their research to practical use, not to mention add to their revenue streams.



<http://swissinnovation.org/newsUS/web/2012/03-121126-a0.html>

New defibrillator heart device placed under the skin

(The Boston Globe, November 27, 2012)

After federal regulators approved the first defibrillator that can be placed under the skin instead of connecting directly to the heart, doctors at Brigham and Women's Hospital implanted three of the new devices in patients at risk of cardiac arrest. Doctors call it a breakthrough treatment in preventing sudden cardiac fatalities, the most common cause of death in the United States. But the cardiac device has imitations because it currently can only be used for ventricular fibrillation — when the heart beats too rapidly. Standard defibrillators, which also act as pacemakers, can adjust to pace the heart when it is beating too slowly. Boston Scientific estimates the new device eventually could generate annual sales of \$750 million to \$1 billion worldwide.



<http://swissinnovation.org/newsUS/web/2012/03-121127-af.html>

4. Nano / Micro Technology / Material Science

Ban of polystyrene and polyethylene bags

(The Boston Globe, November 18, 2012)

Brookline's move to ban plastic bags and polystyrene food and beverage containers continues to draw mixed reviews, but local businesses are already looking into what they need to do to adapt. Town Meeting members voted, 142 to 53 in favor of prohibiting supermarkets, some pharmacies, and some other larger retail stores from using disposable polyethylene bags as checkout bags at the point of sale. Also they voted to prohibit use of disposable polystyrene for take-out food and beverages packaged in food service establishments in the town. Brookline selectmen said that by late last week they had received both positive and negative feedback on the bans.



<http://swissinnovation.org/newsUS/web/2012/06-121118-3e.html>

5. Information & Communications Technology

Video game industry is moving to smartphones

(The Boston Globe, November 01, 2012)

The swift migration of gamers from costly consoles to smartphones and tablets, where games are often free or 99 cents, is causing a tectonic shift in the video game industry that has hit a burgeoning sector of the Massachusetts economy especially hard. Every gaming entity is looking at mobile and saying, 'This is where the growth is, and this is where we have to go to engage with a much larger audience. Games are the number one category of sales at Apple Inc.'s App Store; tablet users spend 67 percent of their time on the devices playing games, according to the mobile analytics firm Flurry, while smartphone users dedicate 39 percent of their time to games.

<http://swissinnovation.org/newsUS/web/2012/05-121101-a5.html>

Precise sport decision with high-tech support

(The Boston Globe, November 04, 2012)

Advanced technology is available to help game officials make extremely accurate rulings. From an engineering perspective, there is no shortage of options for new officiating technology, including virtual reality goggles, sensors implanted in footballs, cameras that chart every on field movement, and intelligent equipment that relays data about players. At this stage, introducing additional technology for NFL officials is more a business problem than anything else. It takes financial incentives and, ideally, league backing to turn entertainment, military, aerospace, and other technologies into systems suitable for sports.



<http://swissinnovation.org/newsUS/web/2012/05-121104-af.html>

Social media influence on presidential campaign

(The Boston Globe, November 05, 2012)

Social media platforms have been influential sounding boards during this presidential campaign not only for political satire, but as vehicles for Republicans and Democrats to push their messages and promote their candidates. Part of the reason the debates and this year's campaigns are generating so much social buzz is that many people watch TV with smartphones and tablets nearby and are just a few clicks away from making a fresh posting, said Tom Thai,



Bluefin's director of marketing. The phenomenon, which the company tracks for major television networks, is known as social TV.

<http://swissinnovation.org/newsUS/web/2012/05-121105-c9.html>

Hotbed research for big data tech revolution

(The Boston Globe, November 06, 2012)

Some of Massachusetts' most successful tech entrepreneurs have raised \$1 million to open a computing center in Cambridge to ensure the region remains a hotbed of research on the so-called big data tech revolution. The center, known as hack/reduce, will provide space for 150 computer engineers and data scientists to work on solutions for understanding and examining the torrents of data generated from the Internet and millions of wired devices — from smartphones to medical equipment.

<http://swissinnovation.org/newsUS/web/2012/05-121106-69.html>

Social DJ filters TV shows tweets

(The Boston Globe, November 12, 2012)

An iPad app from a Weston start-up, Sidecastr, wants to make it easy for you to peruse snarky, insightful, and funny tweets about your favorite TV. Sidecastr captures the tweets about a particular TV show as it's broadcast and filters them in two ways. The first tries to eliminate redundant or spammy tweets, or tweets that aren't really of interest to most viewers. The second involves a human curator, a social DJ, who flags and categorizes the best tweets. As users watch a show, live or recorded, the app tunes into the audio to figure out where you are in the show — even if you've paused it or jumped ahead — and plays the relevant tweets.

<http://swissinnovation.org/newsUS/web/2012/05-121112-14.html>

Remote-controlled smart homes

(The Boston Globe, November 17, 2012)

For years, tech enthusiasts have raved about the potential of cutting-edge "smart home" technologies that would allow homeowners to remotely monitor and run their everyday appliances and electronic systems with the simple push of a button. Now that smart-home era has arrived. Propelled by the emergence of digital mobile devices such as iPhones and iPads, remote-control systems are increasingly being installed in homes for a variety of household items: television and sound systems, heating and air-conditioning units, lights, garage doors, security cameras, and other gadgets. Costs for various systems can vary greatly — depending on how extensive, integrated, and high-end consumers want to get with their remote-controlled gizmos.

<http://swissinnovation.org/newsUS/web/2012/05-121117-64.html>

Simplifying global Web commerce

(The Boston Globe, November 25, 2012)

Popular e-commerce sites such as ToysRus.com and Amazon.com are using i-parcel, based in Burlington, to speed up thousands of international deliveries. Through a matrix of technology and old-fashioned courier services, i-parcel provides service in 92 countries, processing orders and payments in 56 currencies. Billing itself as an alternative to FedEx, UPS, and DHL, seven-year-old i-parcel promises Internet merchants a less expensive and more customer-friendly way to move goods around the globe. The 80-employee i-parcel is able to keep costs down because "we don't fly planes or have people in uniform," Welch said.

<http://swissinnovation.org/newsUS/web/2012/05-121125-68.html>



Google buys Cambridge online marketing start-up

(The Boston Globe, November 28, 2012)

Google Inc. has acquired Cambridge online marketing firm Incentive Targeting Inc., a five-year-old start-up that builds software for retailers to offer customers targeted promotions. On its website, the company said, "As part of Google, we will have the resources and expertise to continue the transformation of couponing from a way to give discounts to a way to build business. And, we can now work towards that vision as part of a company that improves the lives of hundreds of millions of people every day." In 2010, Google bought another Cambridge company, travel technology firm ITA Software, for \$700 million. That deal has provided the basis for much of Google's new online travel services.

<http://swissinnovation.org/newsUS/web/2012/05-121128-46.html>



6. Energy / Environment

Boost for Great Lakes cleanup research

(The Boston Globe, October 31, 2012)

Shortly after President Barack Obama took office in 2009, his administration kicked off the Great Lakes Restoration Initiative to begin solving problems that experts said were seriously degrading the system containing nearly one-fifth of the world's surface fresh water. Congress has appropriated more than \$1 billion toward the initiative's first three years, and funding has already been approved for about 700 projects, including efforts to prevent Asian carp, an aggressive invasive species, from reaching the lakes and starving out native fish. The program has drawn praise from environmental groups, state officials and others who have long warned the Great Lakes are in danger of becoming ecological wastelands.



<http://swissinnovation.org/newsUS/web/2012/06-121031-9b.html>

More severe weather due to climate change

(The Boston Globe, November 01, 2012)

Hurricane Sandy has refocused political attention on climate change, largely absent in this campaign season, with both Senator Scott Brown and Elizabeth Warren addressing it during campaign stops in recent days. While the hurricane was not directly attributable to global warming, scientists said it fits a pattern of more severe weather influenced by climate change. Boston, by several measures, is already experiencing more severe weather such as more intense rainstorms, which scientists have predicted would be triggered by climate change.

<http://swissinnovation.org/newsUS/web/2012/06-121101-aa.html>

Los Angeles goes green with Swiss support

(Tagesanzeiger, November 12, 2012)

California is one of the leading states when it comes to environmental protection and green technology. In 2006, the "Golden State" adopted a new law to reduce air pollution by a quarter until 2020. Los Angeles is planning to invest billions in the public transportation system, supporting twelve different projects with a main focus on the Metro. Additionally, the infrastructure of Los Angeles Harbor has to become more modern in order to reduce pollutant emission. The Swiss Know-How is highly appreciated in the USA and many Swiss companies use this chance to enter the US market.



<http://swissinnovation.org/newsUS/web/2012/06-121112-43.html>

Harnessing Ocean power

(The Boston Globe, November 18, 2012)

New England is reinventing its maritime industry again, turning to the sea not for fish or whales or trade, but energy. From the Bay of Fundy to Long Island Sound, new technologies are harnessing the power of ocean tides and winds, promising not only an inexhaustible source of energy, but also hundreds of jobs, billions in revenues, and new life for struggling fishing communities along New England's 473-mile coastline. Ocean energy is also generating economic activity on land. The nation's first commercial testing facility for large wind turbine blades opened in Charlestown to support blade designers and manufacturers developing advanced materials that can stand up to harsh winds and elements offshore. Quantifying just how big the ocean-based clean energy industry could be for New England is difficult, but analysts and others agree that it could be worth billions.



<http://swissinnovation.org/newsUS/web/2012/06-121118-07.html>

3,300 gas leaks discovered in Boston

(The Boston Globe, November 20, 2012)

Natural gas is escaping from more than 3,300 leaks in Boston's underground pipelines, according to a new Boston University study that underscores the explosion risk and environmental damage from aging infrastructure under city sidewalks and streets. Gas companies and the state Department of Public Utilities say the risk of an explosion from the leaks is exceedingly small. Serious leaks are repaired right away — as were the six that Phillips's research team discovered — and the remaining ones are not at levels high enough to cause an explosion. The aging pipes are planned to be replaced by more flexible plastic pipes as quickly as possible.

<http://swissinnovation.org/newsUS/web/2012/06-121120-4d.html>



Climate change forum in Boston

(The Boston Globe, November 25, 2012)

There could be enough water in Boston for boats to float and fish to swim across the Public Garden if a super storm were to hit Boston years from now. "Sandy was a warning," US Representative Edward Markey, a Malden Democrat long active in climate change legislation, said as about 150 people filled the Great Hall, where he led a town hall-style meeting on the costs Greater Boston could face if a super storm hits. Cast as a gathering to contemplate the havoc climate change could cause, the meeting drew together speakers who focus on the issue and an audience that included many area activists.

<http://swissinnovation.org/newsUS/web/2012/06-121125-c2.html>

Global warming a present danger

(The Boston Globe, November 26, 2012)

Hurricane Sandy was the most powerful instance yet of mundane weather trumping abstract science to make people face the truth. Rising sea levels just moved from future threat to present danger. The Pentagon had earlier this year emphasized climate change as a national security issue and in his post-election acceptance speech, President Obama warned of "the destructive power of a warming planet." So perhaps this unprecedented problem will finally be meaningfully addressed by the president and Congress, with new emphasis on green energy, carbon taxes, anti-fracking legislation, elimination of subsidies to oil and gas companies, rejection of new pipelines, and so on. But even if carbon emissions were dramatically reduced all over the planet, the biosphere is already facing catastrophe.

<http://swissinnovation.org/newsUS/web/2012/06-121126-48.html>



7. Engineering / Robotics / Space

Retirement of space shuttle Atlantis

(The Boston Globe, November 03, 2012)

Accompanied by astronauts and shuttle workers, the space shuttle Atlantis made a slow, solemn journey to retirement at Kennedy Space Center. It was the last space shuttle to orbit the world and the last to leave NASA's nest. About 200 workers gathered in the early-morning chill to see the spaceship out in the open for the final time. The fact that several hundred shuttle workers are about to lose their jobs, now that Atlantis is being turned over to the visitor complex, dampened the mood.

<http://swissinnovation.org/newsUS/web/2012/07-121103-e4.html>



Evidences of ice on Mercury

(The Boston Globe, November 29, 2012)

Scientists announced that a NASA mission, MESSENGER, launched in 2004, has found strong evidence of frozen water and the hints of organic materials, carbon-based molecules that are the building blocks of life on Earth - though the researchers emphasized the discovery does not mean there is, or ever was, life on inhospitable Mercury. Mercury is a hot planet; the surface temperatures are hot enough to melt lead. But some of the craters near the north pole are in permanent shadow, meaning they could act as "cold traps" that hold water ice. All that does not suggest there is or has been life on Mercury but it does suggest that the ingredients for life aren't scarce and unusual on planets in the solar system. It raises the possibility that life could occur someplace itself, not necessarily Mercury.

<http://swissinnovation.org/newsUS/web/2012/07-121129-af.html>



8. Physics / Chemistry / Math

Physics in the news:

<http://web.mit.edu/physics/news/index.html>

<http://www.physics.harvard.edu/about/news.html>

<http://www.seas.harvard.edu/news-events>



9. Architecture / Design

Big success for NASA shirt fashion

(The Boston Globe, October 31, 2012)

Ministry of Supply broke records to become the most successful fashion project to date on Kickstarter. Three MIT graduate students discovered that the last innovation in men's shirt was 30 years ago and designed their Apollo shirt. Selling for \$105, the shirts are designed from a proprietary fabric the same that NASA uses in space suits to control heat absorption and heat loss to make the wearer more comfortable. On top of regulating temperature, the fabric (which currently has six patents pending) is designed to fit better. It has stretch so it can fit closer to the body.

<http://swissinnovation.org/newsUS/web/2012/11-121031-43.html>



10. Economy, Social Sciences & Humanities

Aging baby boomers affect future transportation planning

(The Boston Globe, November 09, 2012)

The Baby boomers, those 74 million people born between 1946 and 1964 have been the major driver of overall growth in travel in the United States and that has had a tremendous impact over the past 40 years in how we have approached transportation planning. As a result of changes over the last four decades, driven in part by baby boomers, the number of vehicles in the US has nearly tripled, the report said. Now that boomers are beginning to move into a new phase of life, their travel patterns and needs are expected to change as well.

<http://swissinnovation.org/newsUS/web/2012/10-121109-44.html>

Systematic approach to help the poor

(The Boston Globe, November 22, 2012)

Billions of dollars are spent each year on efforts to alleviate poverty in the developing world. Yet there have been remarkably few systematic attempts to examine what actually works. To improve the success rate, three MIT professors founded the Abdul Latif Jameel Poverty Action Lab. Since 2003, its researchers have used randomized trials to figure out which interventions help the poor the most. They identified small, inexpensive ways to alter human behavior to produce dramatic, positive results. As for example: Giving mothers in India a bag of dried beans when they bring their children in for immunizations doubles the rate of children who get all their shots. It is a testament to the lab's usefulness that the World Bank has instituted randomized trials of its own.

<http://swissinnovation.org/newsUS/web/2012/10-121122-7b.html>

11. Start-ups / Technology Transfer / IPR / Patents

Harvard i-lab created startups

(The Boston Globe, November 06, 2012)

Start-up Vaxess Technologies was founded by four Harvard University students from different corners of the school's vast campus who met only when each checked out a class at the university's new Innovation Lab. The i-lab is an extension of the classroom where students get to grow and learn, it serves the entire university, to bring everyone together in one place and encourage collaboration. The founder of Vaxess regularly used the i-lab to develop a business around a new technology to stabilize vaccines so they don't need to be refrigerated during delivery. They have regularly used the i-lab to develop the business, taking in workshops and talks from visiting entrepreneurs, even using it as a base from which to raise money.

<http://swissinnovation.org/newsUS/web/2012/11-121106-b6.html>



Civic-minded start-ups

(The Boston Globe, November 12, 2012)

Call it democracy a la carte: A new breed of civic-minded start-ups wants to let citizens decide directly what improvements they want in their neighborhoods, from new dog parks to park repairs, and allow them to donate toward the cost. Using the crowdfunding money-raising model popularized in the tech start-up world, these initiatives allow people to pool donations of time and money for civic projects of their choosing, rather than wait for the work to be done by public employees or not done at all.

<http://swissinnovation.org/newsUS/web/2012/11-121112-3e.html>



Angel investments on rise

(The Boston Globe, November 15, 2012)

Priceline.com Inc.'s \$1.8 billion deal last week to buy the travel shopping site Kayak Software Corp. is the latest example of a tech behemoth gobbling up one of New England's most promising companies. Though these deals remove a marquee name from the local tech landscape, they also lay the foundation for a new wave of promising start-ups by investors and entrepreneurs flush with money and the success from selling their companies. The entrepreneurs at the top of those companies, the newfound wealth can finance another career. The downside, though, is such acquisitions mean Boston loses out on seeing its home-grown companies grow into tech giants in their own right. Local executives say there are more than just bragging rights on the line.



<http://swissinnovation.org/newsUS/web/2012/11-121115-d9.html>

Competitive "Demo Days" for young entrepreneurs

(The Boston Globe, November 18, 2012)

A trio of so-called accelerator programs — designed to help entrepreneurs transform concepts into companies. It offers entrepreneurs a place to work for about three months and connecting them with experienced mentors. They supply a small amount of seed money — anywhere from \$12,000 to \$50,000 — in exchange for a single-digit percentage of ownership in each company. And since they only accept about a dozen companies in each class, they can be tougher to get into than an Ivy League university. In November the three programs held their equivalent of diploma ceremonies, typically dubbed "Demo Days." That's when graduating entrepreneurs get the chance to deliver a quick pitch for their ideas to an audience of prospective investors.



<http://swissinnovation.org/newsUS/web/2012/11-121118-74.html>

New York is the new hot spot for ICT start-ups

(The Boston Globe, November 19, 2012)

New York ranked fourth, ahead of Boston, in a new study rating regions around the world based on the amount of start-up activity this year. In New York, it found, a growing number of software companies are making money faster and creating jobs quickly. The results reflect the growth of New York City as a center for technology start-ups and the city's intensifying efforts to promote itself as a hub of Internet innovation. Indeed, some of the hottest new social media companies such as Tumblr and Foursquare call Manhattan home, and over the past year Facebook Inc. and Microsoft Research have opened outposts there.

<http://swissinnovation.org/newsUS/web/2012/11-121119-18.html>

Boston Innovation Center under construction

(The Boston Globe, November 25, 2012)

The Boston Innovation Center, now being built near the Institute of Contemporary Art is going to face different neighborhood's businesses than the Cambridge Innovation Center at Kendall Square, ranging from financial companies like John Hancock and Fidelity Investments to robotics firms like Rethink Robotics to "synthetic biology" companies designing organisms to produce fuel. Like the first model home erected in a housing development, the Innovation Center will be the first structure in the 23-acre Seaport Square, which will eventually include residences, offices, hotels, and retail space. Most of the Innovation Center's 12,000 square feet will be devoted to flexible space for meetings, small conferences, classes, and parties.



<http://swissinnovation.org/newsUS/web/2012/11-121125-1d.html>

Boston and New York gain on innovation economy partnership

(The Boston Globe, November 27, 2012)

Boston's innovation economy has always remained one step ahead of its rival's. So many of the Hub's boosters winced when a new study found that the growth of technology start-up companies in New York is now outpacing Boston's. But its conclusions shouldn't be overblown, either. The study focused solely on start-up activity from Internet software companies. That sector is New York's strongest, with its other sectors lagging far behind. In Boston, Internet software is only one part of the city's more varied start-up economy. More importantly, leaders of Boston's innovation economy have long argued that viewing New York as a rival is shortsighted, because the two cities have more to gain in partnership than in competition.

<http://swissinnovation.org/newsUS/web/2012/11-121127-e3.html>



12. General Interest

Record number of Swiss tourists in the US

(Tagesanzeiger, November 10, 2012)

In 2012, more than 500,000 Swiss tourists traveled to the USA. This is more than in any year before. In 2003 the USA tourism dropped in Switzerland due to the beginning of the Iraq war. The interest in US travels recovered only slowly. Many thought the current boom was due to the change of government and called it the Obama-Effect. However, statistics show that the exchange rate of the dollar is of more importance for the rapid increase of travel to US. The USA is a versatile travel destination and interesting to a wide range of visitors. For a long time each region was responsible for their own promotion, only recent a new initiative, Brand USA, started to promote US tourism under one entity.



<http://swissinnovation.org/newsUS/web/2012/12-121110-4a.html>

Black Friday sales

(The New York Times, November 25, 2012)

After spending years to make Black Friday into the year's blockbuster shopping day, retailers undercut themselves last week. Sales on the day after Thanksgiving fell from those a year earlier. While store visits on the Friday after Thanksgiving rose 3.5 percent from last year, to more than 307 million visits, retail sales decreased 1.8 percent, according to the research firm ShopperTrak. One clear winner for the weekend was online shopping. Sales increased 17.4 percent on Thanksgiving, and 20.7 percent the next day, according to I.B.M., which tracks e-commerce transactions from 500 retailers. Black Friday "is certainly not dead," said Matthew Shay, chief executive of the National Retail Federation trade group, but "it's starting to spread out."



<http://swissinnovation.org/newsUS/web/2012/12-121125-8a.html>

13. Calls for Grants / Awards

> SNSF Project Funding

The Swiss National Science Foundation (SNSF) accepts applications for project funding on April 1 and October 1 each year. Applications must be submitted directly by researchers.

<http://www.snf.ch/E/funding/projects/Pages/default.aspx>

> EU Seventh Framework Programme

The seventh EU Framework Programme on Science Research and Innovation

http://cordis.europa.eu/fetch?CALLER=FP7_NEWS&ACTION=D&RCN=34831

> New England Venture Summit

Call for Top Innovators. The New England Venture Summit is an ideal venue to connect emerging growth companies with active Venture Capitalists, Angel Investors, Corporate VCs and Investment Firms. It provides an unparalleled opportunity for startups to meet, network and showcase their innovative investment opportunities to a leading group of investors.

<http://www.youngstartup.com/newengland2012/overview.php>

Upcoming Science and Technology Related Events

>> More events at swissnex Boston:

<http://www.swissnexboston.org/activities/events-inhouse>

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