

Participants at the 2nd Biomimicry Europe Innovation and Finance Summit. From L-R: Christian Häuselmann (Summit Chair and Co-founder swisscleantech), Lynn Reaser (PLNU/FBEI San Diego), Markus Assfalg (Canton of Zurich), Cathy Gallagher (PLNU/FBEI San Diego) and Randy Ataide (PLNU/FBEI San Diego).



Bio-inspired investment models could transform global economy

Elana Caro

15 September 2014 | updated

15 September 2014

At the second Biomimicry Europe Innovation and Finance Summit, Lynn Reaser from the Point Loma Nazarene University in San Diego and Simon Tribelhorn from the LIFE Climate Foundation in Liechtenstein discussed how the right investment vehicles could transform 3D printing and other bio-inspired technologies into a major economic catalyst in the 21st century.

Zürich. Around 120 participants from around the world gathered in Zurich on September 4-5 at the second Biomimicry Europe Innovation and Finance Summit to explore how 3D printing could unlock the full potential of bio-inspired technologies and solutions.

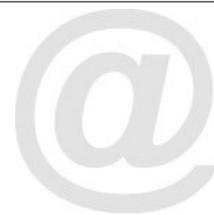
Zurich could be a hub of biomimicry

The Summit's choice of location was no coincidence: It is a city that is well suited to biomimicry thanks to its high concentration of SMEs and world-class research institutes, Markus Assfalg, Head of the Business and Economic Development Division in the

Office of Economy and Labour at the Canton of Zurich

, said in his opening remarks. Assfalg indicated that biomimicry could even find a home for itself in the planned National Innovation Park, which the city would like to have built in Dübendorf, on the outskirts of Zurich.

Assfalg also sees a role for the city's world famous financial industry with respect to biomimicry. With the financial industry looking to develop new services, now is the time – and place – to develop and adapt



innovative models of investing to make bio-inspired technologies and solutions a truly global “game changer”.

Bioninspired 3D printing a trillion dollar industry

Lynn Reaser, Chief Economist for
Point Loma Nazarene University
at the

Fermanian Business & Economic Institute
(FBEI) and one of the creators of the
Da Vinci Index

– a tool that measures activity in the field of bioinspiration, biomimicry and biomimetics – presented on the
FBEI’s latest report, “

Can 3D Printing Unlock Bioinspiration’s Full Potential?
”

.

Reaser explained that bioinspiration activity has grown more than six-fold since 2000, but it has not yet reached its full potential because of low public awareness or even outright scepticism, lack of commercial success, and no major investment vehicles. She contrasted this with the explosive growth in 3D printing, which in the course of only 20 years has grown into a 30-billion-dollar industry. But it, too, has its limitations such as price and availability of materials, and the limits of traditional design.

According to the 106-page report, 3D printing and bioinspiration could each unlock the full potential in the other to create “bioinspired 3D printing solutions” that use sustainable materials, increase efficiency, are based on new designs and produce less waste. The economic potential of bioinspired 3D printing is projected to account for a staggering 1.1 trillion dollars of global GDP by 2030 and could be used to create products in a wide range of industries including medical technology, electronics, plastics, clothing and textiles, and construction.

New investment models needed

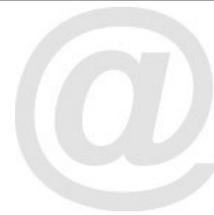
And yet despite the massive financial potential in this industry, available capital remains the biggest challenge to date, with the bulk of today’s funding coming in the form of early stage investment: angel capital, grants, strategic partnerships or even crowd funding. Investors are risk averse and they want tangible products with guaranteed rates of return.

New investment models are therefore needed and which are committed to the entire ecosystem of 3D printing, including education, job training, and materials research, writes Cathy Gallagher, Executive Director of the FBEI, in the report . Likewise, new financial vehicles need to be developed that overcome today’s focus on short-term risk, such as better developing crowd funding models, new index funds, and new private equity or even mutual funds that are customised to the field of bioinspiration.

Funds present new sustainable investment opportunities

Simon Tribelhorn, Executive Director of the
LIFE Climate Foundation
in Liechtenstein and Director of the
Liechtenstein Bankers Association

, presented on the obstacles as well as the opportunities facing sustainable investing. While the 2008 financial crisis has had a serious impact on the lending capacity of banks, Tribelhorn nonetheless believes that new investment opportunities exist, especially in the form of funds such as the European Long-Term Investment



Fund (ELTIF) and Social Entrepreneurship Funds.

As Tribelhorn sees it, the interest in sustainable investing is evidenced in the figures: In 2005, one trillion euro was invested in sustainable funds, with that number jumping six-fold in 2011 to 6.8 trillion. But in order for the financial industry to capitalise on this growth and bring together investors with the capital-seeking side, a number of challenges must still be overcome: The perceived risk of early stage financing, the need for cross-sector dialogue between banks and scientists, the long return on investment in biomimicry, and a clear definition of what sustainable investment is in order to overcome the bias that it is unprofitable or somehow synonymous with philanthropy.

Investment tools already exist

Bringing the participants back to Lynn Reaser's presentation and the work of the FBEI in San Diego, Tribelhorn said that the Da Vinci Index could help overcome some of these challenges because it identifies which sectors will be successfully influenced by bioinspiration in the next 10 or 20 years. It could even become an essential guide for investors, asset managers and fund providers.

Tribelhorn also spoke about the CARLO Foundation

in Liechtenstein, which is developing on a non-profit basis an international, independent sustainable rating system for financial products. The rating system demonstrates to investors that 'risk' is much more than just financial risk, and includes ecological, even societal risk, thus allowing the CARLO Foundation to promote what it calls an "integrated business model", which allows sustainability and profitability to be achieved hand-in-hand without comprising one another.