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Q&A with Daniella Russo CEO of Think Beyond Plastic[™]

Principle Series:

Family Office Insights sits down with Daniella Russo, CEO of Think Beyond Plastic^m, an innovation accelerator with a focus on plastic pollution, sat down with Family Office Insights to talk about the changes taking place in the conventional plastic industry and the subsequent emerging investment opportunities. She views plastic pollution as an untapped innovation and investment opportunity, and believes that the conventional plastic market is prime for disruption, which is creating multiple opportunities for double- and triple-bottom line investments



Family Office Insights is a voluntary, "opt-in" collaborative peer-to-peer community of single family offices, qualified investors and institutional investors.

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Q: Why is there an economic opportunity in plastic pollution?

A: In the last 20 years alone, the world has consumed more plastic than the entire 20th century. Global plastic production has exploded, resulting in visible accumulations of plastic trash, a direct result of market failures in recycling, materials, manufacturing and design. By some estimates, the natural capital cost of plastic in consumer goods sector is almost \$75 Billion per year, and the natural capital cost of plastic pollution in the marine ecosystems is \$13 Billion per year.

Today, the conventional plastics industry is a \$500 Billion industry. The fastest growing segments, which represent almost half of the market, are disposable plastics (plastic food and beverage packaging such as bottles, lids, cups, utensils and snack bags). Other major contributors are disposable medical products, agriculture, constructions and transportation. These are also the segments that contribute most heavily to economic damages associated with plastic pollution: ecosystem degradation, trash and waste management, and public health. These segments are exposed to consumer scrutiny and growing concern, litigation and bans and potential loss of revenue associated with having a negative brand image. The recent announcements by LEGO[™], McDonalds and Dunkin Donuts about moving away from disposable plastics demonstrate their growing concern and interest in finding alternatives. Yet, for the most part, these alternatives are not readily available.

Q: How does Think Beyond Plastic address this opportunity?

A: We are directing disruptive innovation to key problem areas, or "hot spots", of plastic pollution where consumption is the highest and market failures are the greatest: disposable plastic products and packaging, plastic medical waste and microbeads (with a market focus on food services), food and other types of packaging, retail, personal care products, construction, transportation, and agricultural plastic. The innovation will result in high-value investment opportunities in:

- New materials that are non-toxic, truly compostable, fully biodegradable alternatives to conventional plastics, with comparable economic properties and performance characteristics.
- New manufacturing processes that can handle high volume production for these new materials.
- New recycling processes that can handle mixed recycling streams including compostables, bioplastics, bagasse and other emerging materials.
- New consumer product design that conforms to the principles of "circular economy" and reduces dependence on conventional plastic.

Q: Why Think Beyond Plastic and not some of the big conventional plastic producers? Can you succeed or are the odds stacked against you?

A: The odds are in our favor. Conventional plastic manufacturers are looking into renewables and bioplastic materials, but they are slow to move. They protect the status quo, and so for the last 50-plus years this industry has not changed at all. There has been no real innovation; just pumping more conventional plastic into an ever expanding line of products.

Disruptive innovation comes from those who challenge the status quo, from the risk-takers, and from those with flexibility to experiment with new technologies.

We are encouraging innovation that will disrupt the industry. We are bringing this innovation out of the labs and into high-scale production facilities so it becomes price-performance competitive to conventional plastics. Our goal is to remove the barriers to entry, which are significant in this market.

Q: How do you identify innovations or companies that bring solutions? How do you evaluate them?

- A: To source innovation, we have developed strategic partnerships with academic research labs, global innovation hubs and global entrepreneurial hubs. We have also secured access to the I-Bridge database, which has tens of thousands of innovations from technology transfer offices at academic institutions. We search for the following:
 - Material innovations with a focus on nanoparticles, nanocellulose, glass, non-toxic plastic, innovative uses of agricultural waste, reduced toxicity, biodegradability, compostability, moisture barrier, film, etc.
 - **Manufacturing innovations** with a focus on injection molding and extrusion for paper pulp and bagasse, scalable low-cost production of molded fiber, manufacturing alternatives to plastic film, etc.
 - **Design innovations** that focus on models for reuse, C2C principles, integrating the "circular economy" design principles, as well as designs that reduces exposure to toxic chemicals.
 - **Recycling innovations** with a focus on prevention, incentives, measurable increase of collection and material management and waste-to-value innovations.

Q: What are you seeking to accomplish by backing such businesses?

A: We want to secure access to investments that will revitalize the conventional plastics industry and will result in clear economic, social, and environmental benefits. We want to create jobs for the green and blue economies.

Q: What incubation and acceleration services do you offer? To investors, what services do you offer?

A: We work with innovators, independent research labs and universities to identify technologies or ideas, and to formulate and incubate innovations with focus on plastic pollution. Twice a year, we produce an accelerator class with basics on building a business, and special focus on plastic pollution, strategic NGO partnerships and public policy. We produce focused Innovation Challenges and an annual Innovation Competition to identify best ideas, innovations, and businesses that reduce plastic pollution. To investors, we provide due diligence and opportunities to invest directly or co-invest in businesses that measurably reduce plastic pollution and have a sound bottom line.

What investment opportunities are offered by Think Beyond Plastic? Who are your ideal investors?

A: We have created the Think Beyond Plastic Innovation Fund - a micro-fund offering seed investment opportunities in up to 14 early-stage startups each year. The typical investor will have an appetite for seed funding in a double- or triplebottom line investment. In addition, we are creating a Follow-on Fund to invest in businesses from our innovation ecosystem who are past the round of first funding. We also offer direct investment opportunities in businesses that measurably reduce plastic pollution and its impacts.



Daniella Russo

Daniella Russo, Chief Executive Officer of Think Beyond Plastic, is a serial entrepreneur who brings a wealth of executive management from the private sector (from high-tech startups to Fortune-500 companies), and the public sector. She has worked on plastic pollution since 2009 and founded and led Plastic Pollution Coalition, the world's largest NGO focused on plastic pollution. She is a member of the Founders Board of Advisors at StartX, the Stanford University Accelerator. She is an Adjunct Professor at the Middlebury College Graduate School for International Policy. For more information, please qo to http://www.thinkbeyondplastic.com email Daniella at or drusso@thinkbeyondplastic.com.

