

Scarab Funds' Investment Thesis and Theory of Change

Part I. A General Theory of Change

General Theory of Change:

In pondering the pressing dangers of our current global situation, it seems unimaginable at first that there could be one winning theory of change that would precede all others. In the natural world the magnitude of the danger is being signaled by the vast land masses rapidly losing life through clear-cutting, monoculture and poor water management. Indigenous chiefs in the Congo, Brazil and Ecuador are trying to help the modern world realize it is on a path of self-destruction. And yet we go on doing what we have been doing despite the wake-up calls. After the successful Paris Treaty, with global pledges to reduce the production of greenhouse gases, the production continued to rise...why?

1. At least \$1.4Trillion/year in new investments will be needed to achieve the SDG's by 2030. This is on top of the current contributions from philanthropy of \$330B. Much of this new money could come from philanthropies since simple math shows the standard philanthropy gives away 5% of their assets (1/20th) and 20 X \$330B is \$6.6T! If approximately 1/5th of their principal corpus or endowments (\$1.4T) were invested wisely and profitably in Mission Related Investments (MRI's) the SDG goals could be reached. It is the Mission of Scarab Funds to demonstrate how this may be done. The \$1.4T number includes the cost of environmental clean-up and the establishment of sustainable infrastructure globally. It includes the research, development and establishment of new technological solutions to the world's problems in health, education, welfare, energy, job creation and more.
2. Divestment and reinvestment in the best product/service solutions is going to be the leading changemaker. Proxy voting has achieved a great deal in making bad actors less bad. The recent EOG case in which the SEC would not allow Trillium's resolution gives a death knell to this approach. In any case, real direct change will come from investments in the solutions both private and public that provide investors with broad diversification and returns that would provide sufficient resources for retirement. Without this professionally managed approach \$1.4T in new investments will not be done.
3. Finally, a "paradigm shift" in thinking will be required for these goals to be truly successful:
 - First: when the masses shop or invest they will need to employ their **imagination** and ask themselves: "who made this?" "how were the workers treated (slaves or paid a living wage?)" "are the ingredients healthy for me?" "did the production of this item cause environmental harm or was it beneficial to nature and society?" etc. Trust in disclosure is essential. Altruism will guide consumer behavior.
 - Second: political and commercial organizations will need to find **inspiration** and be inspiring to consumers, voters and investors by developing a sense for the Zeitgeist, i.e. what is needed now to transform society for the good of all. Competition will evolve into collaboration for the good of all.
 - And third: artists, writers, scientists and entrepreneurs will need to develop crystal clear **intuition** about the future and bring their breakthroughs, innovations and insights to create a future that is vibrant and diverse rather than perfectly homogenized and dehumanized. Creativity requires freedom.

Part II. Scarab's Investment Thesis

An investment thesis, in short, consists of the reason(s) to invest. At Scarab Funds, we invest in general to provide:

1. **Growth:** a return appropriate for the risk taken; with

2. **Liquidity:** returns within an appropriate time frame; and
3. **Transformation:** positive change or impact.

The specific investment thesis differs for each specific investment, but from a financial perspective and an impact perspective we maintain that, in general, the best practices for fund management apply whether it is an impact fund or not; *and* well run companies with high ratings in terms of Environmental, Social and Governance (ESG) practices; as well as beneficial products and/or services, are likely to outperform companies that do not manage ESG well, and/or produce goods or provide services that are detrimental to society/environment. We are currently proving this out with a **market neutral strategy** that is long the former and short the latter in two portfolios that otherwise have balanced attributes.

Growth and Liquidity/Time Frame are the key factors in any portfolio design, whether providing a general strategy for a specific investor or designing any of our Scarab Funds. The ecosystem of investments in a portfolio is designed to provide the appropriate level of volatility (risk) for the return expected. We believe that the efficient frontier model continues to work for portfolio design despite what happened in 2008 when most public asset classes were highly correlated and lost money. For short periods of time it can be prudent to increase the allocation to cash (this saved our clients from losing money in 2008). Combining Scarab Funds in different proportions will tend to give different performances which are primarily a result of the asset allocation and secondarily the result of individual investment picks or market timing (though both make a difference). We consider it highly risky, nevertheless, to own companies that are owned by the vast majority of investors (such as Apple or Facebook), because of their tendency to swing the market.

In order of liquidity, here are the Scarab Funds' liquidity and return characteristics:

1. **Scarab Global All-Cap (SGAC):** public stocks, 3-day liquidity in global markets; with a 10% growth expectation over time.
2. **Scarab Short Duration (SSD):** less than one-year private debt; 60-day liquidity in micro-finance and other laddered debt; with a 2-6% variable growth expectation
3. **Scarab Global Community impact (SGCI):** Intermediate term private debt; 2-4 year hold with occasional liquidity; and 10% growth expectation
4. **Scarab Green Real Assets (SGRA):** Long Term Equity in real estate, timber, agriculture and renewable infrastructure and financing; 7-10 year hold; 10% growth expectation

Rather than producing niche impact funds focused on one SDG goal at a time, we believe there is a need to model professional fund management with diverse impact themes in each asset class, with further diversification by owning a mix of asset classes, all relevant to the SDG goals. A standard portfolio might include:

- 60% SGAC, which is hedged defensively and has achieved a Sharpe ratio over 2 since inception (very low relative volatility) in part because of dividends, covered calls, occasional increases in the cash allocation, and because it does not own popular stocks that tend to move market swings. Gross performance numbers for 2017 gave us a slight edge on the S&P with far less volatility. The universe of global stocks shares high ESG ratings and provide inherent benefits to society (see wikipositive.org and CSRHub.com)
- 10% SGRA, which is sufficiently diversified to warrant the 1% management fee, currently holds 2 sustainable timber funds; a new timber enterprise that sequesters carbon at a multiple of the average rate for trees and provides farmers with excellent income; a leader in green real estate; first responder

mobile battery power; energy efficiency financing; sustainable agriculture and renewable energy infrastructure.

- 25% SGCI, which provides high return, diversified income with a variety of impact focused private debt offerings, both direct to the enterprise and through funds; and
- 5% SSD, which is unsecured microfinance through intermediaries, and secured direct short-term private debt.

Part III. Transformation/ Impact

Transformation/ Impact depends on the theory of change for each investment. The change we seek is largely defined by the 17 UN Sustainable Development Goals:



To achieve these goals and play our part as impact investors, it is important to clarify which goals are purely investable and which will require institutional and general cultural change. Here is our theory of change in relation to each goal (some example enterprises in brackets):

1. **No Poverty:** many socio-cultural elements result in ongoing poverty, and socio-cultural change will be required before this goal can be reached. Those who live in poverty today (defined by \$1.9/day) are less than 10% of the global population; in 1990 it comprised 40% of the global population. Education of girls, formalization of land rights, healthy nutrition, peace and equal rights all need to come together for this trend to continue. Our investment focus currently includes the formalization of land rights (**Panel Group**) and technology to assist the indigent to receive benefits they require (**Communally**).
2. **No Hunger:** without healthy soil, food cannot be nutritious, and without nutrition hunger prevails. Fast food, with high sugar content, has created a growing endemic of obesity and insatiable hunger. Good food leads to good thinking, education and on to improvement of living standards. Good food begins with sustainable agricultural practices and local healthy food production. Our investment focus currently includes local food production (**Iroquois Valley Farms**) and distribution (**Small Change**) and the financing of appropriate technology for small scale local farming in East Africa (**Innovare**).
3. **Good Health:** Clearly, ending hunger and poverty are related to good health, and this aspirational goal can be supported by and supports all the other goals. It is our theory of change that health is an outcome of healthy living, good nutrition etc., and, when there is a need for intervention, health will be achieved more successfully through natural remedies, and holistic protocols, than from allopathic battles to “kill the enemy.” Bacteria continues to morph in hospitals, winning the battle and causing a high percentage of deaths. Our investment focus is on the personalizing of healthcare through technology (**∞Workflow**), and public stocks in medical equipment, research, prevention and natural remedies (**Boiron**).

4. **Quality Education:** It is our belief that the best education is free with no strings attached. That is, educational systems need to be supported by society through grants, donations and public support, while given freedom to develop new curricula and avoiding the pitfalls of standardized testing. Cultural differences should be celebrated and research without strings to corporate interests encouraged. For-profit education is generally to be regarded with skepticism, while we invest in online educational tools and technology (**CSRHub.com** and **wikipositive.org**) that are empowering individuals to freely develop.
5. **Gender Equality:** To some extent this is more a policy issue than an investment theme, although “gender lens” investing has done a great deal to awaken investors to the reality that women are often better managers and are essential to healthy governance. Policies that protect equal rights and laws that encourage equal pay for equal work need to become the norm in the western world. As investors we look for enlightened companies with women in leadership roles, although this is a secondary consideration to the actual products or services that we want to own. Our investment focus here is again in the formalization of land-rights and the development of financial systems that empower women entrepreneurs (**Microvest**).
6. **Clean Water and Sanitation:** Institutional public expenditure has been under-allocated globally so that water and sanitation systems are archaic and based on ancient low volume designs that are ill-equipped for the massive urban environments they serve. Private-Public-Partnerships (PPP's) are required. At the same time there are thousands of new water technologies emerging that are capable of tracking water infrastructure problems (**Redzone Robotics**) detecting toxins (**AndAllyze**) and isolating toxins (**Liberty Hydro**). The massive urban systems may need leapfrog technologies and systems to replace the old. Drinking water is not just a matter of digging wells. There are many non-profits in this space that have found the maintenance of wells to be problematic. The best model we have seen to date is **GoConsciousEarth** which provides equipment for communities in the Congo to dig wells with human power, while empowering them to maintain the wells through education and broad community support. Simple filtration, solar powered desalinization and water from air are technologies to watch and invest in as they evolve.
7. **Renewable Energy:** The sun rays down more energy than we could use each year and many multiples of what is available from fossil fuels. Some of this energy is converted into bio fuels through photosynthesis. One family of plants that may be used as a bio-fuel (halophytes) grows in desert conditions watered with sea water. Hydrogen, separated from water by wind turbines in the North Sea could power all of Europe. The point is this: we do not need to tap the fossil fuel assets in the ground anymore. They need to become “stranded” to save the world from unnecessary air pollution and the risk of further climate change. A conversion to renewables could happen overnight, with policy (Norway is pushing toward electric vehicles only), or consumer demand. This is a very investable area. Our investment focus is on the development of small-scale renewable energy projects that provide high annual distributions and a likely roll up sale in the future (**Kendall Investments**). We are agnostic about technology and like diversification in this space as long as it does not include Natural Gas (often mistaken as clean energy), Nuclear (there is no spent fuel solution), large scale Geothermal (sacred lands), or large-scale hydro (dams destroy ecosystems...run of the river systems may be fine). We are interested to see what the New Physics may yield as ongoing experiments continue.
8. **Good jobs and economic growth** are parts of every investment thesis worthy of consideration. Profit is generative for the economy especially if it is circulated back into the community with improving jobs and higher standards of living. Growth for growth's sake, however, is cancerous and will not lead to the fulfillment of other aspirational SDG goals. “Good jobs” needs to be defined as meaningful, fulfilling jobs that support the needs of the workers and protects them from dangers or hazards. Besides general investments that consider these goals, we specifically believe that it is important to

support main street businesses that serve the needs of the local community. This is increasingly possible through crowd funding. We invest through diversified funds by groups that source deals through online search and analysis (**Prime Meridian**) or through Small Business Administration's due diligence and approval of SBIC's (Small Business Investment Companies like **Star Mountain** or **SJF Ventures**).

9. **Innovation and Infrastructure:** In our theory of change, we assert that growth in the long run is a matter of forward looking and well-founded innovation. We look for this in every investment as our overall goal is to solve the world's problems with the most innovative solutions. Infrastructure is what ties society together, and in our perspective infrastructure planning needs to consider those elements of life that are needed equally by all citizens of the planet. Exclusive or isolating infrastructure (like a Wall) is not contributing to the SDG goals, while equalizing infrastructure that provides clean water, affordable clean power, transportation, cultural buildings and common ground for parks and recreation certainly does. Again, such generally needed enterprises lend themselves to a PPP structure, where investors kick start projects that can be backed by governmental budgets. Our focus has been Water (**Meidlinger Partners**) and solar. Innovative transportation solutions are on our radar.
10. **Reduced Inequalities** is an aspirational goal that may be best addressed by institutional change on a governmental and cultural level. The Occupy Wall Street movement was a cultural phenomenon which helped awaken the inequities related to the financial sector and the acceleration of disparities in income that had become the norm. This goal is also intended to bring about greater respect and cooperation between nations. Multinational corporations are central to this problem, as they have interpreted their "personhood" in the law to mean entitlement to grab whatever resources they can acquire for their own interests. Free markets are an excuse for bullying and what is needed is a cultural awakening to the idea that business must and will drive positive change when it recognizes that as a "person" its primary responsibility is to meet human needs. Shareholders will benefit from this shift. Our focus, again, is on property rights as the most impactful focus for overcoming dysfunctional inequality globally, where 70% of the world population lives in informal economies without security in their homes.
11. **Sustainable Cities and Communities** is again primarily going to be affected by institutional commitments and regional collaboration. Once these commitments are made there can be a flood of positive change through a plethora of investments in technology, infrastructure, education and so on. Cities and communities will continually become "smarter" and more efficient. It is important not to abandon the Arts in a rush to sustainability and material efficiency. The arts community has always been invaluable to the gradual awakening of consciousness, through observation of the majestic beauty surrounding us or the humorous exposing of cracks in the status quo.
12. **Responsible Consumption** underlies all the interconnected SDG's as responsibility is a sine qua non. As the Downeast joke says: "we can't get there from here," if we don't take responsibility for the resources, we use daily. The organic and local food movements give reason for optimism that attitudes and preferences can change dramatically over time. Investors are the last consumers to wake up it seems, due to the financial theory that has dominated our thinking for decades: namely that to enjoy the best financial outcomes one must *only* focus on the numbers, and any other focus, such as impact, or SDG goals, must come at a cost. This theory is no more than a theory. In reality, prudent investors, if they are to have fiduciary responsibility to their future benefactors, *must* consider the material impact of their investments on the future of society and the planet. The natural and human resources of an economy must be cared for.
13. In fact, it is our investment thesis that financial performance can only benefit in the long term by best practices in the management of resources. Rogues and cheats may disagree, but it is common sense that a sustainable economic future requires the conservation and enhancement of natural and human

resources. We are what we eat, so this goal can first be approached with responsible food production and distribution but extends through all Scarab investment due diligence.

14. **Climate Action.** This goal assumes that the scientists are correct, that the world is not flat, and the ice caps are actually melting, with an increase of unusual weather both cold and hot, wet and dry, which we call “global weirding.” In order to avoid arguments, it is prudent as a fiduciary to consider these factors as risk factors, just as any other risk factor may be unknowable. Climate Action needs to be a precautionary blitz on probable causes for the current acceleration of rising sea levels and disastrous storms and tsunamis. It also requires planning and investment to increase the resilience of communities near or on coastlines. The engagement of political leadership is essential in our theory of change. Unfortunately, it may take a tsunami to wake up leaders and to overcome the status quo.
15. **Life Below Water.** The fact that reefs are dying is mostly out of sight and out of mind. Yet these areas are vitally important to the ecosystems of the ocean, and these ecosystems are vitally important to the whole planet. This slow death process is proceeding mostly unnoticed and yet our lives depend on it. One major killer is the flow of septic waste and chemical products used in medical and agricultural practices. But the unregulated use of sunscreen is coating the surface with oil that prevents a healthy exchange with the biosphere, and this may be a primary cause. Once these polluting practices end, it has been possible to attract life back into the reefs with sound. Much more R&D is required. This applies to the pollution from plastic that does not breakdown. We invest in solutions (**Polymateria**) that go beyond recycling to, for example, the sequestration of plastic back to the earth as carbon and water.
16. **Life on the Land.** Though this may seem too vague as a goal, the key word is “life.” We would invest in anything that enhances life on the planet, whether it is social life or natural life. Bio-dynamic Agriculture (I completed a two-year certification process and farmed for 10 years) goes beyond the concept of sustainability to “self-sustaining” practices. In other words, the farm or garden strives to create an organism that optimizes the existing resources and minimizes outside input over time. Lynne Twists aphorism: resources appreciate in value when they are appreciated” is a key idea for enhancing life on the planet. Just in Time or Lean Manufacturing was part of the evolution from Eli Whitney to Ford and later Deming’s work in Japan; but Paul Newman’s concept of using idle resources took this to a very local level of hiring workers about to lose their jobs, to make salad dressing in underutilized facilities, distributed with otherwise empty trucks. This concept has been used with underutilized labor successfully in the Pacific Rim (**Patamar Capital**).
17. **Peace and Justice.** I once heard a chant at a demonstration: “No Justice, No Peace!” as if to equate them and there is some truth in this, though each come about in different ways. Keeping the peace, peace-making and inner peace are different iterations involving security and diplomacy on a political level and meditative practice or self-development on the individual level. Justice can be a matter of policy that supports equal rights, or it can be enforced by a legal system of retribution or punishment. It is our perspective that the latter form of justice will never lead to peace. It is notable that in Norway (by some reckoned to be one of the happiest countries in the world) the maximum jail sentence is 5 years, even for a mass murderer. We are opposed to mass incarceration as a private business model and the slave labor used in prisons. In Norway, the emphasis is on rehabilitation. Forgiveness is as healthy for the one hurt as the one forgiven. Reconciliation is the greatest tool for peace and justice (**Karuna Center**). And an economy that meets all human needs is the foundation for both.
18. **Partnerships for the Goals.** Without collaboration these goals in general cannot be accomplished. PPP’s will play a significant role and already encourage investors with matching funding such as SBIC’s offer. Foundations, as stated above, could do the \$1.4T/year required all by themselves, but won’t without significant support from experts in the field including for-profit and governmental organizations. Smart-mob research (**wikipositive.org**) and critical oversight, as well as willing

transparency will support a more intelligent consumer/investor. Rudolf Steiner suggested that the economy would be served well by associations of producers and consumers in each industry. Understanding of consumer needs and concerns would be matched with the consumers' deeper understanding of the challenges faced by each area of business. This can be practiced to further understanding between fund managers, investors and investees (**RSF Social Finance**). Ultimately, this approach would create more stable markets where values and pricing would be based on deeper understanding.

Closing Remarks

In practice Scarab's Theory of Change and Investment Thesis must drill down to specific investments in diverse enterprises of varied scales, private and public, from global regions in a range of industries and asset classes. We are holistic investors who believe that understanding the whole is an advantage and that overseeing this range of possible investments is like having a broad range of colors on a palette or ingredients to choose from in producing a delicious meal. Like varied tastes and colors, each industry can play a specific role in the solving of the 17 SDG's. I am currently writing a series of articles in more depth on each industry focus which will appear in my follow-on book to [Making Money Matter](#); *Impact Investing to Change the World*.

In a kind of closing summary, the following provides a simple idea of our focus for the various Industries listed by the Sustainable Accounting Standards Board (SASB). In our combined Investment Thesis and Theory of Change, these simple foci help us zero in on the best solutions for our time and what to avoid:

Healthcare: Avoid allopathic, chemical, big pharma; Invest in natural remedies, prevention, rehabilitation and personalization.

Financials: Avoid too big to fail; Invest in local, regional, green.

Tech and Communication: Avoid invasion of privacy and fake news; Invest in individual empowerment, connectivity and self-development.

Energy: Avoid extractive and polluting sources such as fossil fuels; Invest in renewable sources.

Transportation: Avoid inefficient, polluting and disruptive systems; Invest in clean, life enhancing, efficient systems.

Services: Avoid non-essential or de-humanizing services; Invest in essential, supportive services.

Resource Transformation: Avoid wasteful manufacturers using extracted resources; Invest in zero waste production with a leaning toward bio-degradable and recycled materials.

Consumption: Avoid unhealthy and irresponsible products; Invest in healthy and responsible products.

Infrastructure: Avoid gentrification and isolation of disparate communities; Invest in infrastructure that enables and provides equal access to resources.