



Company Background

Driptech is a venture capital-backed, for-profit social enterprise that designs and manufactures low-cost drip irrigation systems for small-plot farmers in the developing world.

The Problem

Six hundred million subsistence farmers lack irrigation water and are mired in poverty. Fully a third of the world's population suffers from water scarcity. Without access to affordable water efficient irrigation, small-plot farmers are unable to grow crops during much of the year. Without marketable produce, already meager incomes decline, and farmers may even become unable to meet the nutritional needs of their own families.



Lack of suitable irrigation severely limits the earning power of small-plot farmers

Milestones Leading to the Solution

Spring 2008

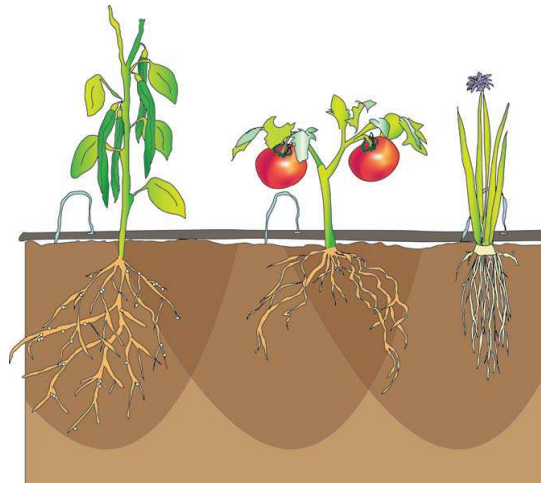
Peter Frykman travels to Ethiopia as part of a team from Stanford University's Entrepreneurial Design for Extreme Affordability. Peter witnesses firsthand the hardship caused by the worst drought Ethiopia has experienced in 20 years. Farmers he meets have no means to grow crops with their scarce water resources. Locally available drip irrigation products are too expensive for most farmers and seldom work properly. Recognizing the need for less costly and more effective ways for small-plot farmers to use their meager water supplies efficiently, Peter returns to the Stanford d.school and invents a new manufacturing technology that makes clean, consistent holes in super-low-cost plastic tubing.

Summer 2008

Peter incorporates Driptech to manufacture and sell drip irrigation tubing for emerging markets across the globe and raises initial seed funding.

Fall 2008

Fifteen small-plot farmers in rural India who were previously unable to afford irrigation control participate in a pilot study. Participants respond unanimously that the Driptech system saves water, labor, and time. They ask to test more farmland than anticipated. Neighboring farmers want to purchase the product for themselves. The response to the product is overwhelmingly positive.



Precise holes deliver water to root zone

Spring 2009

Driptech moves into a Palo Alto office and recruits key leaders in both entrepreneurship and appropriate technology to its board of advisors. Students from Stanford and other top universities join the company to support business and technical development.

Fall 2009

Driptech achieves first sales in India and China.

The Tech Awards honors Driptech as a Laureate in Economic Development for “technology benefitting humanity.”



Indian pilot study participant

BusinessWeek selects Driptech among the 25 Most Intriguing New Businesses of 2009.



Installation for a Chinese greenhouse farmer

Winter 2010

Driptech installs systems in 200 greenhouses in Lingjiu County in Shanxi, China.

Spring 2010

Angel investors and a social investment fund stake an additional \$900K to scale up manufacturing and expand into a larger facility, bringing total investment to over \$1M.

Summer 2010

Commercial scale manufacturing begins at Driptech's Mountain View facility in support of the product launch in the Indian market. Peter builds out his management team, and the team sets up several additional demonstration plots in Karnataka, India.

Fall 2010

Driptech partners with local distributors and launches commercially in India. Driptech's systems sell directly to farmers through retail and local distribution channels.



Agricultural store in Dindori, Madhya Pradesh, India

Spring 2011

Driptech adds additional distribution partners in India.

Summer 2011

Driptech closes a series A investment round led by Khosla Impact Fund. The company is selected by the World Economic Forum as a 2012 Technology Pioneer.

Next Steps

As Driptech continues to develop strategic partnerships with dynamic organizations aligned with its mission, it is refining its distribution logistics and establishing a local manufacturing presence in the countries in which it operates. Next generation manufacturing machines will be portable, enabling adoption of a radically decentralized production model. Driptech will deploy manufacturing facilities directly to where the product is sold, allowing for local customization of the systems, reduced shipping costs, and added benefit to rural economies through generating local jobs.

Expansion of Driptech's operations beyond Asia will follow, with the objective of reaching millions of farmers.



A family using a Driptech system in India transplants chilies

Leadership

Peter Frykman, CEO, Founder



- Leads strategic growth across the company
- BS and MS in Mechanical Engineering, Stanford University

Whitfield Fowler, Engineering Manager



- Previously Electromechanical Systems Engineer, Velkess
- MS and PhD Mechanical Engineering, Stanford University
- BA Physics, St. Olaf College

Sarah Huber, Director of Business Development



- Previously Engagement Manager, McKinsey & Company
- MA International Finance & Policy, Columbia University
- BS Management Science, MIT

Pratyush Pandey, India Country Head



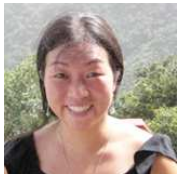
- Previously CEO and Managing Director, Global Easy Water Products (GEWP)
- State Marketing Coordinator for Rural Development, World Bank

Jean Shia, Director of Business Operations



- Previously Investment Manager, Avant Housing
- MBA, UC Berkeley Haas School of Business
- BS Urban Studies, Cornell University

SuShien Pang, Director of Operations



- Previously Director of Operations, D.Light Design
- Engineer, Agilent Technologies
- BS Mechanical Engineering and Business Administration, UC Berkeley

Advisors

Paul Polak, Founder of International Development Enterprises

Frank Rijsberman, Former Director General of the International Water Management Institute

James Patell, Herbert Hoover Professor of Public & Private Management, Stanford University

Hal Kruth, Owner, Sustainacorp

Sam Goldman, Founder of D.light Design

George Northup, CEO of Memeo

Scott Petry, Founder of Postini, now owned by Google

Eric Rey, CEO of Arcadia Bio Sciences

Susan Mac Cormac, Partner, Morrison Foerster

Dave Lyons, Entrepreneur-in-Residence at Claremont Creek Ventures



Peter demonstrates the Driptech system to interested Indian farmers

What does Driptech do?

Driptech is a privately held, for-profit social enterprise that designs and manufactures low-cost drip irrigation systems for small-plot farmers in the developing world.



A gravity fed system near Melur, Tamil Nadu, India

What makes Driptech special?

Recognizing the need for less costly and more effective ways for small-plot farmers to use their meager water supplies efficiently, Driptech systems fulfill a huge unmet need for drip irrigation tailored to the 500 million small farmers with landholdings of less than 5 acres in the developing world. Driptech drip irrigation offers all of the benefits of traditional commercial drip irrigation (reduced water usage by 30% to 70%, increased crop yields of 20% to 90%, and substantial time savings) with the following additional features optimized for plots of one acre or less:

- Designed for very low water pressures, including gravity feed from buckets and tanks
- Visibly higher uniformity of water application than any other low-cost product
- Easier to install, maintain, and expand
- Costs two to five times less than traditional drip irrigation

In addition, Driptech's decentralized manufacturing model will deploy production facilities directly to regions where the product will be sold, allowing for local customization of the systems, additional cost reductions, and added benefit to rural economies through generating local jobs.

Who are Dripteck's customers?

Dripteck's initial focus is on the small-plot farms of India and China. Together, these countries are home to over 300 million farmers with holdings of 5 acres or less. They use much of their water resources for irrigation of crops. Agriculture in Asia consumes 73% of all freshwater used for agriculture in the world, and only 1% to 2% of farmers there are currently able to benefit from existing commercial drip irrigation. Dripteck has already received numerous expressions of interest from Africa, Latin America and Eastern Europe, and will, in the future, expand its presence to other developing countries around the world.



An installation near Melur, Tamil Nadu, India

How much does a system cost?

The cost is dependent on the country and the specific attributes of each installation. Dripteck systems scale to fit the individual plot, and prices vary proportionally. In general, a Dripteck system costs two to five times less than other commercially available drip irrigation systems.



Installing a system in Namaleri, India

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How do you know your product is effective?

In India, an initial pilot study with 15 farms in the state of Tamil Nadu between October 2008 and March 2009 proved the product's effectiveness. Recent additional installations in Karnataka, Bihar, and Jharkand have met with similar success. Farmers' responses have been overwhelmingly positive. They are currently growing crops during the dry season with documented success. "The model introduced by Mr. Peter Frykman is a low-cost model compared to other models...it is working well," said P. Rama Reddy of Saragapally. Farmers who have seen the system are asking to acquire them for their own farms.



Peter with pilot study participants

In China, 200 farmers in rural Shanxi Province installed systems in 2010 through sales to the Lingqiu County government. Data collected prior to, during, and after a planting season in Lingqiu has confirmed the positive impact of the systems. Farmers report saving 33% of the water and 70% of the time that they had previously spent on irrigation, with increased yields of 31%, on average.

What returns do farmers receive from their investments?

Compared to flood irrigation, Driptech irrigation increases crop yields by 20% to 90%, improves product quality, saves water by 30% to 70%, and reduces the required labor, energy costs for pumping, and fertilizer. Driptech systems operate on very low water pressures.

The additional income gained by switching from flood to drip irrigation varies by crop and geography, but typical small-plot farmers could recoup their initial investments in less than 6 months, with significant increases in income over the next 3 to 5 years - the lifespan of the product.

How do you reach your customers?

We partner with local distributors to effectively reach farmers in rural areas.

In China, the national and local governments are very focused on rural development and environmental sustainability. The first sale of Driptech systems there was to municipal officials in Shanxi province for 200 greenhouse farmers in the area.

In India, our partners have well established distribution relationships with individual dealers and storeowners.

In every part of the developing world there are various organizations targeting the needs of small farmers. They already have farmer access, but need turnkey technology solutions designed for their customers. Driptech's proven manufacturing expertise is the natural complement to these local organizations' strengths in marketing and distribution. Partnerships with non-governmental organizations (NGOs) offer opportunities for customer education and technical support through providers with longstanding community ties and local knowledge.

Partnerships with microfinance institutions (MFIs) will also enhance outreach and education while expanding financial options available to potential customers. We look forward to joining forces with these organizations to better address the needs of the world's small-plot farmers.



Lingqiu shopkeeper



Distribution in Lingqiu, China

How does Driptech protect its social mission while scaling profitably?

Driptech has built its social mission into its product, which is inherently optimized for small farms. As a for-profit social venture, it is not only economically sustainable, but scalable as well, leading to long-lasting, large scale social impact. We strive to reach millions of farmers.

Our partnerships with MFIs and NGOs respected in their own right for their development work will serve to reinforce our social objectives and encourage continuing alignment with our stated mission.

Our investors are a combination of social and financial investors. While our team and investors are inspired by the social impact of our product, the management of Driptech is highly pragmatic, drawing on the many years of entrepreneurship and high-caliber business experience of our advisors and management team.



Working a flood irrigated field

What competing irrigation solutions do small-plot farmers consider?

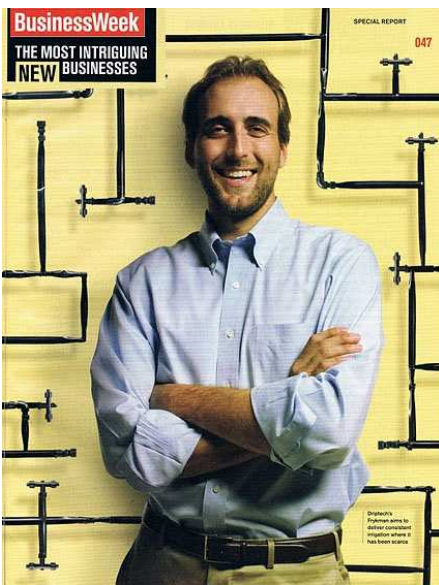
Flood irrigation is the most widespread alternative currently employed by the farmers who are Driptech's target customers. This method, while popular, requires heavy labor and wastes large amounts of water. This also results in fertilizer runoff and lower crop yield.

Other drip irrigation systems, including those offered by major Israeli and Indian companies, are fundamentally not designed for small plots, being both too large and too expensive for the farmers Driptech serves. The necessary features of large-scale drip irrigation are prone to clogging and maintenance problems, which prevents more widespread adoption. Furthermore, distribution networks of traditional drip irrigation manufacturers are not designed to reach Driptech's remote rural customers at an affordable price.

Is there anything else we should know?

Driptech receives frequent recognition for its exceptional work:

- 2012 World Economic Forum Technology Pioneer
- 2011 SVN Innovation Award, San Francisco Business Times Cleantech + Sustainability Award
- 2011 International Green Industry Hall of Fame Inductee
- 2009 BusinessWeek's top 25 Most Intriguing New Businesses
- 2009 Tech Awards Laureate in Economic Development for "technology benefitting humanity"
- 2010 BusinessWeek's top 5 Most Promising Social Entrepreneurs
- Featured in Forbes, The Economic Times, The New York Times, Wall Street Journal, San Francisco Chronicle, Red Herring, CNET, and Bloomberg Businessweek



BusinessWeek, November 2009



The Tech Awards, November 2009



CNET, April 2010