



# Converting Stranded R&D Assets into Revenue-Generating Businesses

## WHAT'S INSIDE:

### Why Promising Technologies Fail to Get to Market

#### Commercializing Innovative Technologies:

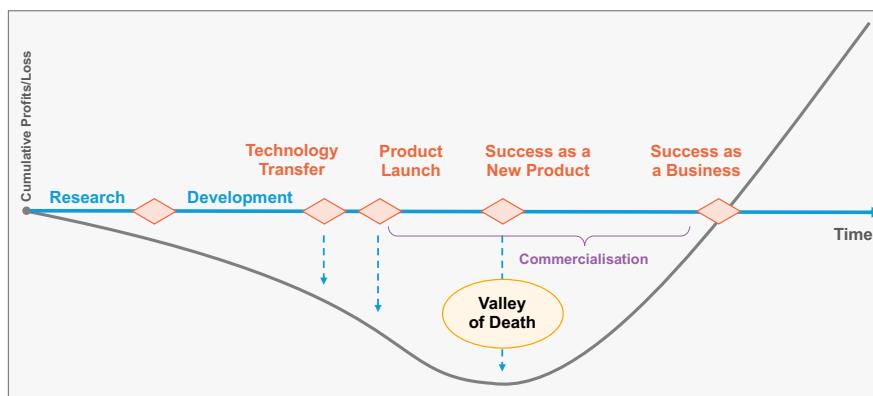
- Pulpex, the world's first 100% recyclable paper bottle
- Simply Roasted, a category- disrupting potato chip
- w'air, a sustainable handheld fabric care device

### How Venture Management Turns R&D Spend into Growth Assets

## Introduction

Changes in corporate leadership, bandwidth shortages and re-directed resources result in nearly \$250 billion in corporate IP becoming stranded or discarded yearly. Putting just a portion of this wasted spend to use could improve a company's P/E ratio by 3-5 percent.

Read on to learn how to accelerate innovation into the marketplace, increase your ROI on R&D investment and avoid missed revenue opportunities.



## Why Global Corporates Press Pause on Innovation

Many of the assets that end up in the 'Valley of Death' have benefited from years of development and millions of dollars in R&D investment. Corporates bear significant costs to maintain this stranded IP—we've seen clients spend as much as \$45m on international legal filing fees on a patent portfolio just for it to stand still.

Novel products and technologies are often stranded for reasons that have nothing to do with the opportunity itself, but rather because of what's happening in the organization or the market at a specific moment in time. We've seen opportunities at TR level 3-4 become idled because:

- resources were redirected to core brands
- innovation was too far from and disruptive to the company's core business
- the opportunity lacked or lost its internal champion
- management or corporate strategy changed direction
- other projects take priority
- bandwidth or resources were limited.

## Failure to Launch: Why Good Technologies Don't Get to Market

Pilot Lite has been helping global corporates identify and commercialize stranded and non-core innovations using our proven venture management approach since 2009.

When we go looking for stranded innovation within corporates, we find highly developed technologies. What we don't find are well-developed strategic, commercially and financially rigorous business plans. Successfully designed innovations often fail to reach the market simply because the same energy and resources that went into its R&D weren't invested in its path to market.

Some other factors that cause an R&D opportunity to falter at the commercialization stage are:

- test-marketing or launching at the wrong time, with the wrong business head or the wrong business model
- more research than actual market testing performed
- missing the consumer trend
- relying on misleading or incomplete data from small or online-only market testing.

## Deep Dive: Commercializing Disruptive Technologies

In 2019, we established the Pilot Lite Capital (PLC) investment vehicle to acquire and commercialize pre-market corporate technologies on our own, using the same proven venture management process that has worked for our Fortune 500/FTSE 100 clients. We focus PLC investments on breakthrough innovations that offer solutions to some of the most pressing challenges the world faces today—from increasing sustainability to improving human health.



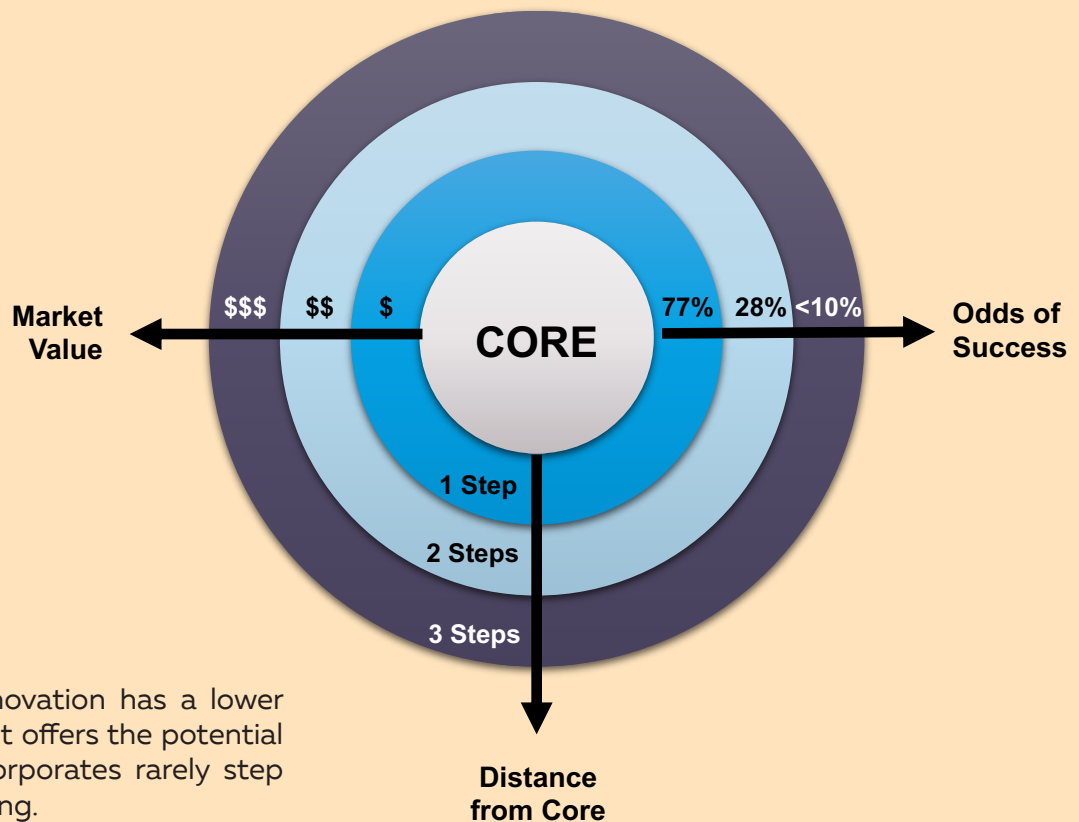
Next, we'll take a deep dive into three ventures backed by PLC and commercialized by Pilot Lite:

- Pulpex, the world's first 100% recyclable paper bottle
- Simply Roasted, a category-disrupting potato chip that offers all the taste of a traditional fried chip but half the fat and significantly less salt
- w'air, a 3-in-1 handheld sustainable fabric care device.

## The Challenge of Transformative Innovation

Left to traditional players, none of these products would likely have made it to market. The type of transformational technologies behind Pulpex, w'air and Simply Roasted are easily lost or abandoned inside a corporate because they:

- are too far from its core business
- are difficult to capitalize
- compete with legacy operations.



Highly disruptive innovation has a lower chance of success but offers the potential of higher returns. Corporates rarely step beyond the second ring.

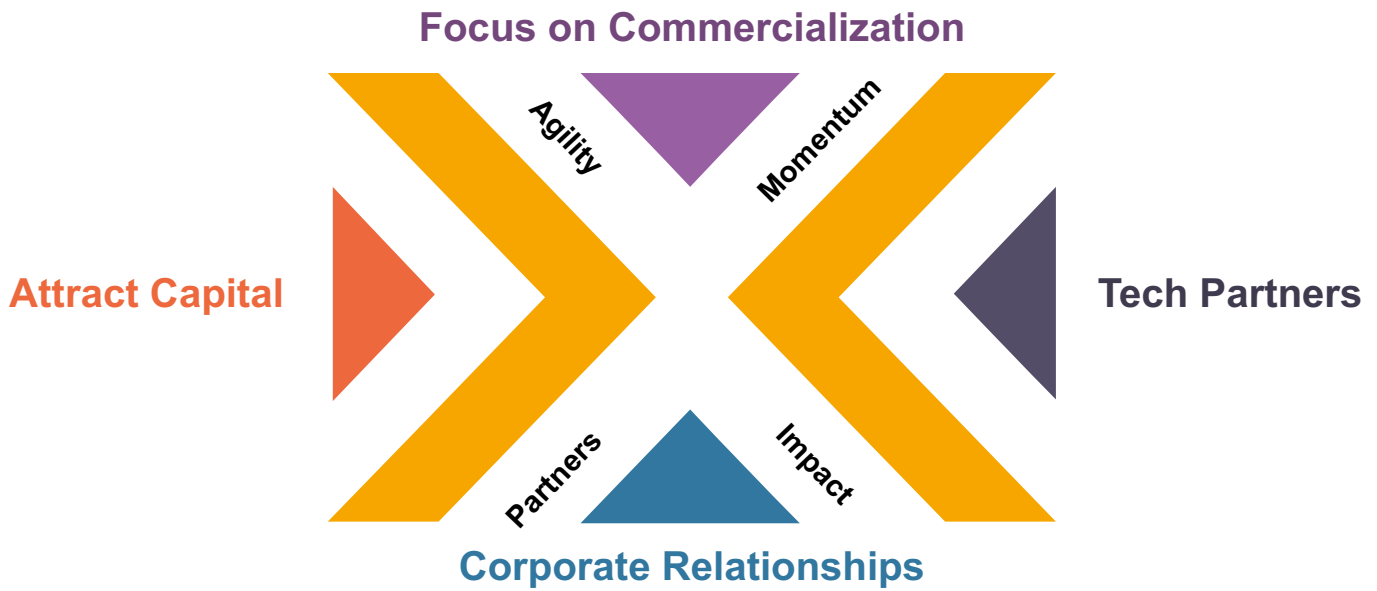
## Pulpex: Developing World's First PET-Free Paper Bottle

Diageo, a world leader in alcohol beverages, enlisted Pilot Lite to evaluate environmentally friendly, scalable alternatives to glass and plastic (PET) packaging capable of holding non-carbonated liquids. We looked beyond food and beverage, performing an extensive search of the aviation, automation and cosmetics industries.

When we were unable to identify a complete solution, we assisted Diageo in developing a bespoke prototype of a single-mould, PET-free, pulp-based bottle capable of holding a range of liquids. To commercialize the innovation, Pilot Lite and Diageo joined together to establish Pulpex Limited, a sustainable technology packaging company based in the UK.

Converting this innovation to a commercial opportunity required:

- **Technology Partners:** Identifying independent technology expertise to help develop core components of the technology
- **Focus on Commercialization:** Quickly unlocking a route-to-market
- **Corporate Relationships:** Creating immediate scale by rallying Fortune 100 CPGs to commit to Pulpex packaging
- **Attracting Additional Capital:** Obtaining consortium commitments and orders to de-risk and allow money to flow to the opportunity.



## Making the World’s First PET-Free Paper Bottle

To develop a first-in-class paper bottle made from FSC-certified, sustainably sourced wood pulp and 0% PET, we overcame several technological challenges including:

- pulp manipulation
- moulding and thermoforming
- chemistry/coating formulation
- coating application.

## Pulpex Technical Breakthroughs

We developed breakthrough solutions for each, developing a multi-patented process that begins with sustainably sourced pulp, which is pressurized into single-mould containers, cured in microwave ovens and sprayed internally with a proprietary food-grade coating that is compatible with the product inside.

Next, the proprietary solutions needed to be mechanized and integrated into a consistent, automated manufacturing process at our production facility in Sawston, Cambridgeshire, UK. Combined, these systems have the capability of designing and producing hundreds of thousands of bottles until brands move to Pulpex high-speed lines in 2022.



## Innovative Business Model

Pulpex Limited is not a manufacturing business, but a distributed technology-under-license business. This business model makes the Pulpex solution viable, valuable and financeable in a way that previous, non-scalable technologies have failed. Pulpex enables CPG companies to successfully transition a portion of their glass and plastic packaging to sustainable, recyclable pulp using existing industrial manufacture and filling infrastructure. This key component of the Pulpex innovation allows corporates to accomplish Environmental, Social and Governance (ESG) initiatives on a commercially profitable basis.

## Importance of Brand Leadership

Pilot Lite helped establish a group of corporate partners consisting of global CPG companies in non-competing categories committed to incorporating Pulpex into their packaging programs. From day one, Pulpex has been designed for corporates, by corporates. Organizing these corporate partnerships accomplished three important objectives:

- scaling the technology faster
- ensuring a wider adoption of the PET-free paper bottle
- obtaining brand leadership to affect change in packaging and consumer behavior.

Corporate partners to date include Diageo, PepsiCo, Unilever, GSK Consumer Healthcare, Castrol, and The Estée Lauder Companies, each working to develop paper packaging for specific brands.



## ABOUT PULPEX PACKAGING

Renewable and recyclable, Pulpex bottles degrade readily in the natural environment and deliver significant improvements on the carbon footprint of glass bottles (90% savings) and PET (30% savings). Pulpex packaging is recyclable in curbside collection and standard waste streams, which have a far higher yield than plastic waste streams.

Pulpex packaging is customizable by size and shape and capable of producing bottles for a variety of market applications, from homecare and personal care products to alcohol and non-alcohol beverages. Embossing, labeling and colored pigments are all available to fit brand needs.





## Simply Roasted: Producing a Category-Disrupting Potato Chip

A leading multinational CPG developed a breakthrough roasting technology for potato chips, investing \$20m and 10 years of R&D. The roasting process produced a premium, peel-on potato chip with all the great taste of a traditional, fried chip but with 50 percent less fat and significantly less salt. Unfortunately, the corporate estimated advancing the technology to the next stage would be too costly and disruptive to its fat-frying processing lines around the world. Despite the promise of delivering a category-disrupting potato chip to the market, the corporate put the technology on pause.

In 2019, Pilot Lite acquired the chip roasting IP, installed a high-energy management team with deep experience in food and beverages, and supported the startup with Pilot Lite's commercialization know-how.

### Minimizing the Cost of Manufacturing

Instead of contracting with a co-manufacturer, the team built and validated its own scalable manufacturing solution from plant to product, creating additional IP and spending just one-fifth of the original estimated budget. The team located its production facility in the potato growing region of Norfolk, UK, which provides easy access to best-in-class potatoes and reduces food miles.

Mapping a route-to-market and establishing packaging and branding were key to successfully commercializing Simply Roasted. With a modern, minimalist approach and vibrant colors, the product packaging is designed to visually pop off the shelf.

### Award-Winning Chip

Unlike other chip products that are fried or extruded into shapes from a potato base, Simply Roasted chips are 100% premium potatoes sliced, roasted and seasoned. While the chip delivers the taste, crunch and mouth-feel of a premium fried chip, its nutritional profile excludes it from the UK's impending restrictions on promoting foods high in fat, sugar and salt (HFSS).



Simply Roasted Sea Salt

Simply Roasted creates an entirely new snacking category that is both premium and better-for-you. Launched in 2021, the unique Simply Roasted chip immediately caught the attention of both consumers and retailers, winning the best new product in the crisps category from *The Grocer*.

Simply Roasted chips are available in stores throughout the UK and [online](#).



The World's First Eco-Friendly, Handheld Fabric Care Device

## w'air: Hydrodynamic Technology Revolutionizes Fabric Care

Pilot Lite acquired a patented and highly disruptive hydrodynamic technology from a global CPG that became stranded because the opportunity was too far from the corporate's core business.

We advanced the technology from a blackbox prototype through design, development and manufacturing, creating w'air, a 3-in-1 sustainable, handheld device that removes stains, dirt and odors, deep cleans delicates and refreshes fabrics between washes.

The revolutionary device uses just a fraction of the water, energy and detergent of conventional laundry. Sleek and compact, it is designed to relieve consumers, clothing and the environment of the burden of constant laundering.

Laundering clothes and fabrics in a washing machine is resource-intensive and hard on both clothes and the environment:

- 7 wash loads per week for family of 4 uses over 350 liters of water
- 90 percent of clothing doesn't need to be laundered in the washing machine, leading to unnecessary wear and tear/color fading, shrinkage and misshaping
- 9 out of 10 clothing items prematurely end up in landfill





## Hydrodynamic Technology Cleans and Refreshes Fabric

The innovation behind w'air is the delivery of an optimal mix of air, micronized water particles and detergent at a specific flow rate through a patented nozzle configuration to effectively remove dirt and odors from fabrics. Scientists analyzed more than 11,000 different combinations of air, water, surfactants, pressure and nozzle angles to determine the optimum cleaning solution. Pilot Lite and the CPG co-developed a range of detergents and pre-treatments formulated specifically to be used with the w'air device.

Commercialization of the w'air device also included sourcing, costing and testing its 70 individual components; selecting and negotiating with a contract manufacturer; and business, marketing and launch plans featuring in-store events, brand ambassadors and partnerships.

w'air is available for sale through retailers, Amazon and its own [online store](#).



**77%**

W'air uses 77% less detergent than machine washing



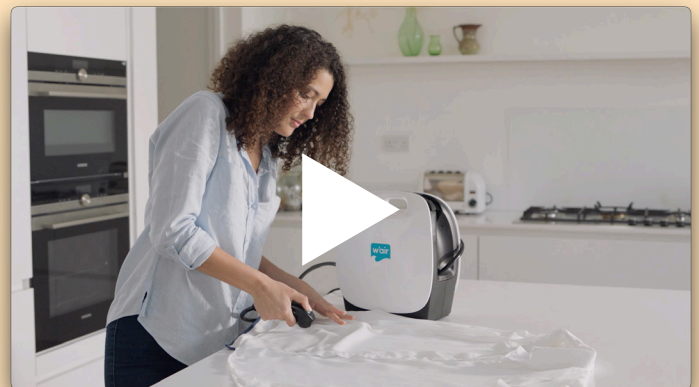
**99%**

W'air uses 99% less water than machine washing

### A 3-in-1 Sustainable Fabric Care System

w'air supplements and, in some cases, replaces regular laundering by:

- refreshing lightly worn clothing so they can be worn longer between washes
- deep-cleaning denim and delicates, eliminating the need for dry cleaning
- removing stains, dirt and odors without the need for long soaks and intense scrubbing
- spot-cleaning items like sneakers that are not ideally cleaned in a machine



### Venture Management: Turning R&D Into a Profit Center

To bring Pulpex, Simply Roasted and w'air to market, we used Pilot Lite's end-to-end venture management approach.

Using this proven, proprietary process, Pilot Lite has achieved a success rate for commercializing R&D assets into successful businesses that's more than twice that of leading investment firms and 10 times that of solo corporate ventures. Our clients include some of the world's largest companies across the food & beverage, consumer goods, healthcare and pharmaceutical sectors.

## End-to-End Venture Management

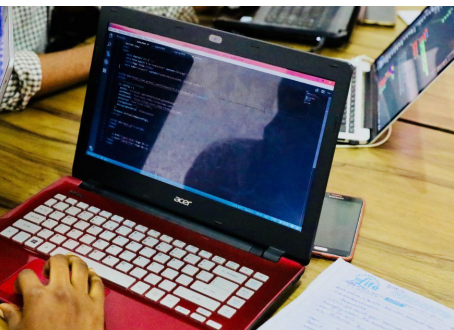
Although clients may engage Pilot Lite at any step, our venture management process begins with a hybrid of traditional and AI-enhanced scouting & identification. Whether we're assessing existing corporate R&D assets or scouting trends and emerging technologies, we identify and assess opportunities based on 170 measures, market trends and cross-industry opportunities.

We look at new opportunities not through the eyes of a venture capitalist or private equity investor, but with a commercial lens to determine whether a venture is viable, valuable and financeable for a corporate.

Our unique, proven end-to-end approach to commercializing new ventures



### Venture Validation



At the venture validation stage, we determine the most de-risked business model, winnable channel and route-to-market, providing real CapEx, OpEx and actual achievable revenues and triangulating online, client and market data. Outcomes include an immediately actionable plan for implementation and readiness for pilot launch. Our goal is to present on Friday what is immediately actionable on Monday.

### Business Ready

Once a venture is validated, preparation for a pilot launch begins. Pilot Lite takes full accountability at the business ready step, contracting and commissioning the core work streams including critical planned pathways, co-packing, logistics and regulatory activities. We negotiate with all the partners in the mosaic to ensure we deliver the opportunity ready for launch.

### Launch



Pilot Lite deployment teams introduce new ventures into the market to stress-test all aspects of a launch, including consumer response, supply chain performance and technology robustness. We're able to assess products both pre-scale and at-scale on test beds. This step de-risks the opportunity and accelerates the scale-up into select target markets. The data we generate by micro-testing provides a corporate's business unit with a blueprint for scaling.

## Scale

To prepare for mass scale, we assess all partners across the supply chain and their ability to cope with geographic expansion. A thorough vetting process is critical to obtain accurate and reliable partners. Following scale-up, a corporate parent may reabsorb the new venture, spin it out into a stand-alone business, or engage Pilot Lite to expand the business into new markets.



## Funding Collaboration

With more than a decade of experience helping corporates accelerate innovation into the market, we know how difficult it is to divert funds from legacy businesses to new ventures. Resources are typically stretched, bandwidth is often limited.

At any stage in our venture management process, Pilot Lite is also capable of deploying capital. Through Pilot Lite Capital (PLC), we're able to invest with corporate clients as:

- co-investor
- scale-up partner
- acquirer of stranded or uncommercialized projects and ventures.



### Mike Anstey

CEO & Co-Founder  
Pilot Lite Group

## About Pilot Lite & Venture Management

[Pilot Lite](#) pioneered the field of venture management more than a decade ago to help corporates get stranded and non-core R&D to market, generating first revenues and positioned to scale internally or externally.

Venture management goes beyond established front-end innovation collaboration. We bridge the gap between idea and market, rapidly turning non-core innovation into businesses that monetize innovation investment and turn R&D spend into growth assets.

For more information or to discuss your commercialization needs, contact us at [info@pilotlitegroup.com](mailto:info@pilotlitegroup.com) or +44 20 3393 6490.