

# Timothy Eiloart

Born 1936.

Transatlantic balloonist and entrepreneur.

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# 1. The life of Tim Eiloart

*The following obituary of Tim Eiloart was archived in 2021, with acknowledgement and thanks, from the Guardian. It was written by Rodney Dale, and was published in May 2009.*

## **Tim Eiloart: entrepreneurial Cambridge spirit and early green champion**

Tim Eiloart, who has died aged 72, was unwittingly crucial in driving the so-called "Cambridge phenomenon", manifested by the dozens of hi-tech companies that have sprung up in and around the city. In 1960, he founded Cambridge Consultants Ltd (CCL), the first independent UK contract research and development company, in a climate where town planning was hostile to commerce, banking was hostile to entrepreneurs, and the university was hostile to industry. Fifty years later, Cambridge and its university are renowned for everything that was then suppressed or non-existent.

Tim was born with a twin sister in Grayshott, Hampshire. His mother was a dermatologist. His father, Arnold "Bushy" Eiloart, founded, among other things, the Yeast-Pac Company - which sold a very successful yeast-based beauty mask - and co-ran the Arts Theatre Club. Tim's early life was devoted to sailing rather than study, but when Bushy threatened to remove him from Westminster school and apprentice him to a boatbuilder, he started to work hard, and came first of 700 candidates for a Ministry of Supply engineering scholarship. In 1955, he went to Trinity College, Cambridge, to read chemical engineering.

In 1958 he joined his father and two friends as their meteorologist and radio operator in an attempt to make the first Atlantic crossing by balloon. After months of planning, a ferocious storm forced them to ditch their balloon, the Small World, after 94½ hours aloft and sail their gondola to Barbados. Their gas ballooning record still stands.

Tim returned to Cambridge to complete his degree, and during his final year undertook a project to appraise a papermill. This gave him the idea for CCL, founded with his share of the money from the Daily Mail for the Small World exclusive.

If, in those days, CCL's audience had any view of consultants, it was one of deep suspicion. This, and a dearth of successfully completed projects, made the rise of the company very slow indeed. But it gradually became what it remains today - a useful springboard for specialised technical companies.

In 1971, CCL ran out of money and was bought out by the US consultancy Arthur D Little, at which time Tim resigned. Life had been so difficult for

so long that his wife Sheila, an orthoptist whom he had married in 1963, had left him the previous year. In 1972, he married Mary Gist, a probation officer.

Tim then embarked on a series of activities: setting up and running a company publishing self-instruction texts, teaching psychology, editing a Mensa journal, and writing for New Scientist. He also devised and developed a case-study technique for recruiting graduate engineers but, as with many of his ventures, he became annoyed and disheartened when those he sought to help failed to grasp the elegant niceties of his approach.

Earlier enthused by the Epiphany Philosophers, Tim became a Quaker, though not a pacifist. However, he supported the Greenham Common peace camp, Berkshire, and was one of the founders of the camp at Molesworth, Cambridgeshire.

He became involved in Green politics in 1982. Standing (unsuccessfully) in local and national elections, he did more than anyone in East Anglia to raise awareness of global warming. But his personality was ill-suited to politics, for in full flow he resembled a firework display, ejecting streams of ideas to be followed up, generally overwhelming those on the receiving end.

In 1986 he used money from the sale of family property to start an arid land recovery trust to research low-tech, affordable devices, with an accompanying regime of simple living and self-sufficiency, aimed primarily at developing countries.

In 1998 his daughter Penny and the yacht she was crewing disappeared between Madagascar and South Africa. Distraught, Tim led immense efforts to trace her, but the prolonged search was without success. The following year, he suffered a stroke but learned to walk again and tried hard to re-establish his life. Five years later, a second stroke left him dependent on a hoist and a wheelchair, but his acceptance of his condition made his life somewhat easier.

He is survived by Mary, a son from his first marriage, and a daughter and two sons from his second.

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## 2. The Small World Transatlantic Balloon

*The following was archived in 2021, with acknowledgement and thanks, from the [www.bajanthings.com](http://www.bajanthings.com) website. The article was written by Peter Burton, and was published in December 2020.*

### **Four days up and twenty days down – The Small World crossing of the Atlantic December 1958**



*The Balloonists of "The Small World" are cheered by the crowd as they drive through the streets of Bridgetown in January 1959. They are left to right: Colin Mudie, Rosemary Mudie, Tim Eiloart and Arnold "Bushy" Eiloart.*

The Small World was a silver and black hydrogen filled balloon captained by Arnold "Bushy" Eiloart, whose quest was to be the first balloon to complete a transatlantic voyage from Tenerife to the east coast of the United States. The Small World balloon had the registration G-APOB. The gondola had the registration The Small World HISC (Hayling IslandSailing Club).

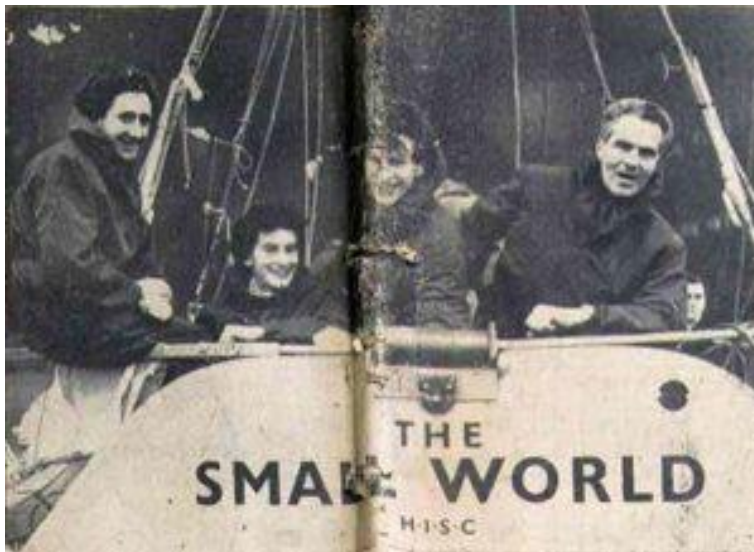
On 5th January 1959 Barbadian fisherman daCosta Brathwaite (right) and his son Chesterfield landed a strange catch at Crane Beach, St. Phillip. On his usual trip to the fishing banks, Brathwaite, the skipper of the fishing boat "New Providence" spotted a small object afloat. Further investigation revealed the object to be the gondola of "The Small World" balloon with its crew of four who had been "missing-at-sea" for three weeks.

Brathwaite agreed to tow the gondola through the dangerous reef to Crane beach for \$50, not forgetting to stop along the way to catch dolphin. He later excitedly declared to onlookers "I saved their lives."



As news of the landing spread, hundreds of Barbadians converged on the scene to welcome the adventurers including Lady Arundell, wife of the Governor. According to the Barbados Advocate of 6th January 1959, the first lady “discarded shoes and waded knee deep in the surf and skipped lively about the beach taking shots of the crew and gondola and the large crowd that greeted them.”

Taking off from Medano Beach, Tenerife, on 12th December 1958, skipper and pilot Arnold “Bushy” Eiloart, radio operator and meteorologist Tim Eiloart, his son, designer and navigator Cohn Mudie and photographer Rosemary Mudie aimed to be the first to fly a balloon – The Small World – 3,600 miles across the Atlantic from the east to the west.



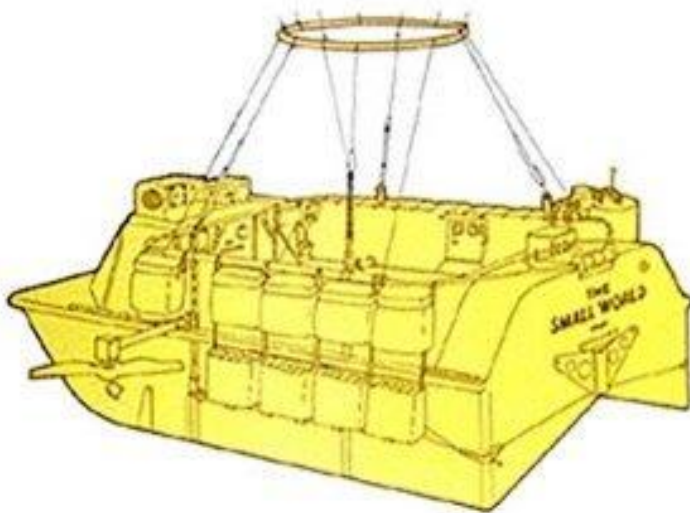
*The Small World crew: Colin Mudie, Rosemary Mudie, Tim Eiloart and Arnold “Bushy” Eiloart.*



*The Small World HISC, G-APOB*



*An artist's impression of the Small World, published in the Daily Mail.*



*The reinforced gondola for the "The Small World" expedition balloon.*

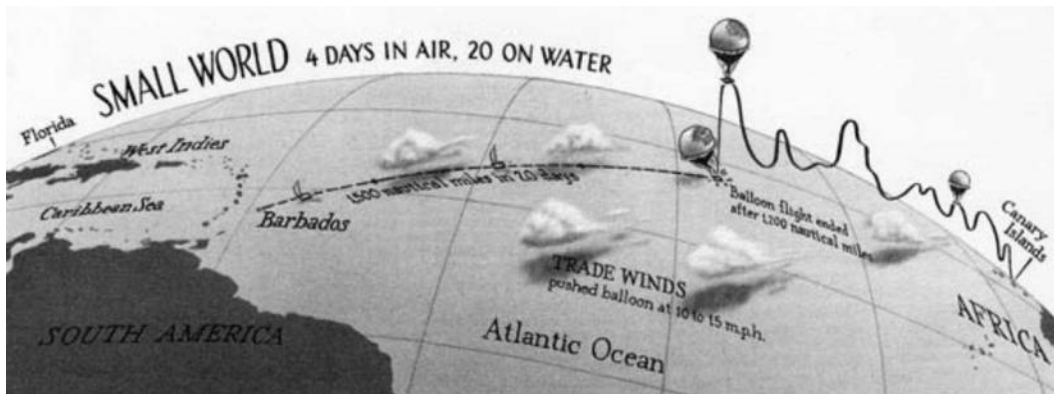
The flight took almost three years to plan: Bushy had to learn how to build and pilot his own balloon and Colin had to come up with a design robust enough for the four crew to be carried further than any balloon before. Eventually, having solved a number of problems, Bushy managed to find

sponsorship from British businesses, which allowed The Small World to be completed.

The design of the cabin was an innovation that would later save their lives. Anticipating that they might well have to travel some of the way by water, Colin designed it to be converted into a makeshift boat that was also strong enough to survive crashing into the ocean. If necessary, the balloon could quickly be unhooked, a mast erected and the four could sail some of the way.

At the launch from Tenerife, the hydrogen-filled balloon overshot their take-off, soaring to about 2,000ft when just over half of that would have sufficed which meant dumping precious gas to bring them down. As a result of the early wasted gas, they only managed to stay in the air for three days, covering 1,200 miles of their planned journey when they got caught in a thermal and were forced to land in the Atlantic on a 5th December 1958.

The crew of Arnold “Bushy” Eiloart, his son Timothy and Colin and Rosemary Mudie completed their journey (another 1,450 miles) in the custom made gondola spending 21 days at sea, arriving in Barbados on 5th January 1959.



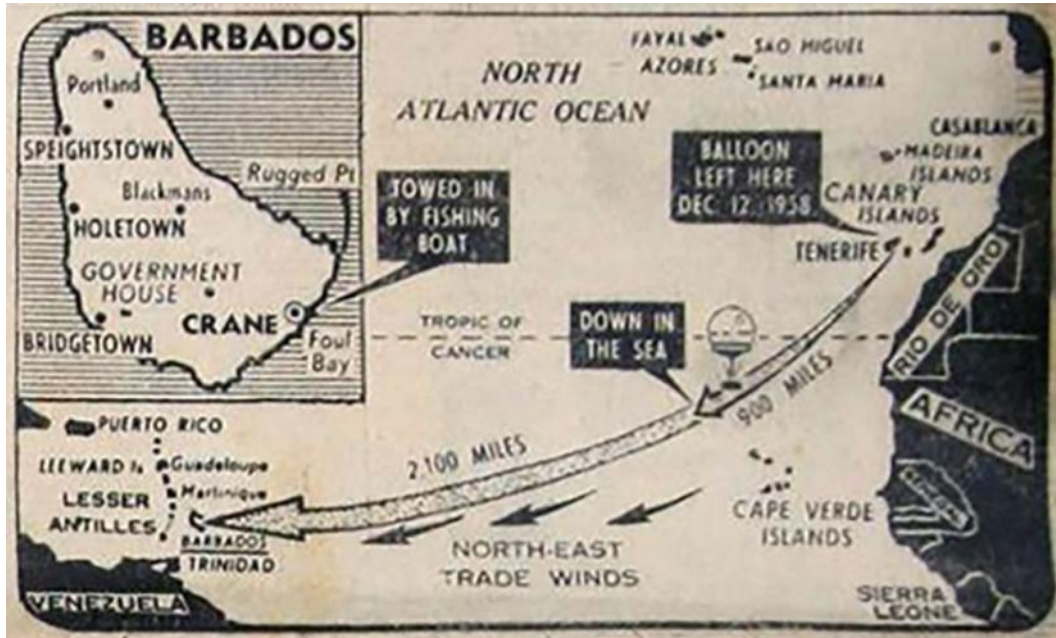
Peter Elstob, Bushy Eiloart’s business partner and The Small World Expedition Manager, noted that the four looked “as though they had just been released from a concentration camp”.

The full story of the crew’s plight can be read in Arnold Eiloart and Peter Elstob’s book “The Flight Of The Small World” published in 1959.

The Small World attempt at crossing of the Atlantic in 1958 is still referred to as one of the most courageous and ahead of its time. It was the first major crossing from east to west, rather than west to east (how all other flights had been attempted up till then) and this was at a time when ballooning was still very much a small, unheard of sport.

The design of Small World was to be copied by others in future attempts at the great Atlantic crossing for the next 2 decades.

The first successful transatlantic balloon voyage came almost 20 years later. In 1978, the Double Eagle II completed the voyage, flying from Presque Isle in Maine, U.S., to Miserey, France, in just over 137 hours. In pictures of Double Eagle II you'll notice the similarities with the gondola design to the one that Colin Mudie designed for The Small World.





# 3. Rosemary Mudie Remembers

## 'Small World' Souvenir

### 'Bushy' Was Turned Down By Army But He Became A 'Hero'

By TONY VANTERPOOL

IMAGINE who was the leader of the "Small World" expedition, that a hero of World War II as an Olympic fencer, a man whose heroism as a "white knight" was only slightly less than his work in the British Army.

Arnold "Bushy" Elliott, the expedition leader, was decorated from the Army during World War II and then, in 1945, he was awarded the Victoria Cross for his gallantry in the field.

After the war, Elliott was turned down by the Army for his "white knight" reputation. He then turned to the sea and organized the "Small World" expedition.



THE "SMALL WORLD" CREW (Left to right) ...

### Success Did Not Surprise Manager

NEW YORK, Jan. 8.—First British television manager for the Americas, Alan ...

... the expedition ...



... another kind of adventure ...



... the day ...



... an artist's impression of the ...



... the Governor ...



... the Governor ...



### Casto's Strange Catch

By GEORGE HUNTE

WITH Barbadians still ...



... Costa ...

... the day ...



... the day ...



... the day ...

*Rosemary Mudie, one of the crew of four of the Small World, along with her husband Colin, Bushy Eiloart and his son Tim, describes the experience:*

In these days, when men walk in space and ships land on the moon, is there anything new still to be tried on earth? There is. Only a few years ago four of us set off to do something never before attempted – balloon crossing of the Atlantic.

It started when Bushy Eiloart, my husband Colin, and I were discussing some transatlantic voyages we had made under sail. Colin remarked that they would all have been drier and much faster if we had been able to float in a balloon a hundred feet above the sea with the trade winds blowing us straight to our destination.

Two years later, we left England, a proper expedition under the patronage of the Duke of Edinburgh, with 45 tons of equipment, including 690 cylinders of gas, a balloon 46 feet in diameter, and a 15 ft. balloon gondola-cum-boat of unique design, bound for the Canary Islands from where we would take off.

Those two years were filled with work. We had to learn about balloons from the few balloonists left over from the great days of ballooning before the first World War. Bushy had to practice and take his examinations for a balloon pilot's license. Colin had to design the special balloon and the car, which we built ourselves. I was in charge of rations and photography, and Bushy's son Tim, who had become the fourth member of the crew, was radio operator and meteorologist.

Traditionally, the balloon car is a wickerwork basket, ideal to take the shock of landing on solid ground and very light. This was no use to us as we were more likely to land in the sea, possibly far from the land, so we built ourselves a very light and strong car of foam plastics skinned with Terylene and epoxy resin which would not only stay afloat if landed on the sea, but was equipped with a small mast and sail. The balloon itself was made of Terylene coated with neoprene, silver on top to reflect the sun, and black underneath, with her name The Small World and air-registration letters painted on in bright orange.

Ballooning is simple in theory. You fill a large bag with gas, hang a net over it to suspend your car from, and there you are. The gas (we used hydrogen), being lighter than air, will want to rise and lift the car from the ground. The balloon pilot controls the height of his craft by a very delicate balance of the lift from the gas and the weight in the car. To ascend he throws out a little ballast and to descend he lets a little gas out of the bag by means of a valve. The balloon can travel only in the direction of the wind,

and only as fast as the wind, and the only control the pilot has over direction is in ascending or descending to find winds of different directions.

We set up our balloon camp on the southern shores of Tenerife, where we could expect to ascend into the trade winds which always blow straight towards the West Indies, where we wanted to go. There were delays while we waited for the right conditions for take-off. Once we got the balloon half inflated, then a very strong wind blew up, and we spent terrible hours while it rubbed itself heart-breakingly on the sand.

The lull we were hoping for came at night, and in a babel of Spanish and English from friends and helpers, we took off. Scraping over the sand, splashing on the sea, we threw off ballast to send ourselves up, and at last, at 1.07 a.m. on December 12, 1958, swung up into the air. The sounds of voices died, and very quickly we were floating 300 feet up with only the shushing of the waves below. We had worked for two years for this moment, and at last we could try out in earnest all the instruments, equipment and devices we had worried and wrestled over for so long.

In theory, and in stable conditions, our 53,000 cubic feet of hydrogen would lift 3,600 lbs. In practice, conditions are never stable, and a constant watch has to be kept on the altimeter. Heat may expand the gas and cause you to rise, or a thermal (an upward current of air) may catch the balloon and lift her like a kite. The pilot drops ballast, usually sand, to stop the descent, and lets out gas to stop rising.

The skill comes in saving as much gas and ballast as possible and we had decided not to use sand for ballast but to pick up sea water. We would also use calcium hydride combined with sea water to produce additional hydrogen, and a pair of pedal operated horizontal propellers to force air downwards and so give a few precious pounds of lift. Hanging below the car we also had an 80 lb. trail rope which acted as an automatic break upon height – when dropped in the sea, the water took the weight, so lightening our load, and when lifted from the sea we gained useful extra pounds.

After our hectic take-off and the delight of finding ourselves actually flying, we began to organize things. Our first setback came when we discovered that the water-lifting bag tripped and emptied itself on the long Atlantic rollers. It took most of the next three days to devise a sock valve and get the system working efficiently. Meanwhile, we had suffered other moments of drama as we learnt transatlantic ballooning the hard way, eerily rising on one occasion in a thermal through mist and cold rain to 3,400 ft. before release of gas sent us rushing down to bounce crazily on the sea. We had agreed that we would consider all but essential equipment ballast, and in an emergency this meant we were prepared to, and did, throw overboard sleeping bags, propellers, radio transmitter, batteries, and non-essential stores.

By our fourth day we had things working well and even found time to take meteorological observations for the Imperial College of Science and Technology. With 1,200 miles behind us, we even dared to think we might manage to fly the next 1,500.

That night just before midnight we heard Bushy shout, “Get up, kids, we’re in another thermal!” All the experts had said that this sort of thing did not happen at night, but there we were, rushing up at 30 ft. a second, bucketing wildly from side to side like a swing at a funfair. I grasped the altimeter and called out the height. Bushy swung on the valve line to release gas. Tim climbed the tossing rope-ladder to cut the tied neck of the balloon – if the expanding gas could not get out, the balloon might burst. Colin collected every possible piece of ballast. We were going to need all we had to cushion our fall when it came!

At last, at 4,600 ft., the needle steadied. We began dropping – but too fast. We had lost too much gas to be able to fly on. We threw out everything possible. Bushy and Colin cut the safety fastenings to the quick releases which held the car to the balloon, and Bushy stood by the line ready to trip the releases. No one had ever done this before – it was not a thing you could practice but we had to part from our balloon before it dragged and capsized us on the sea.

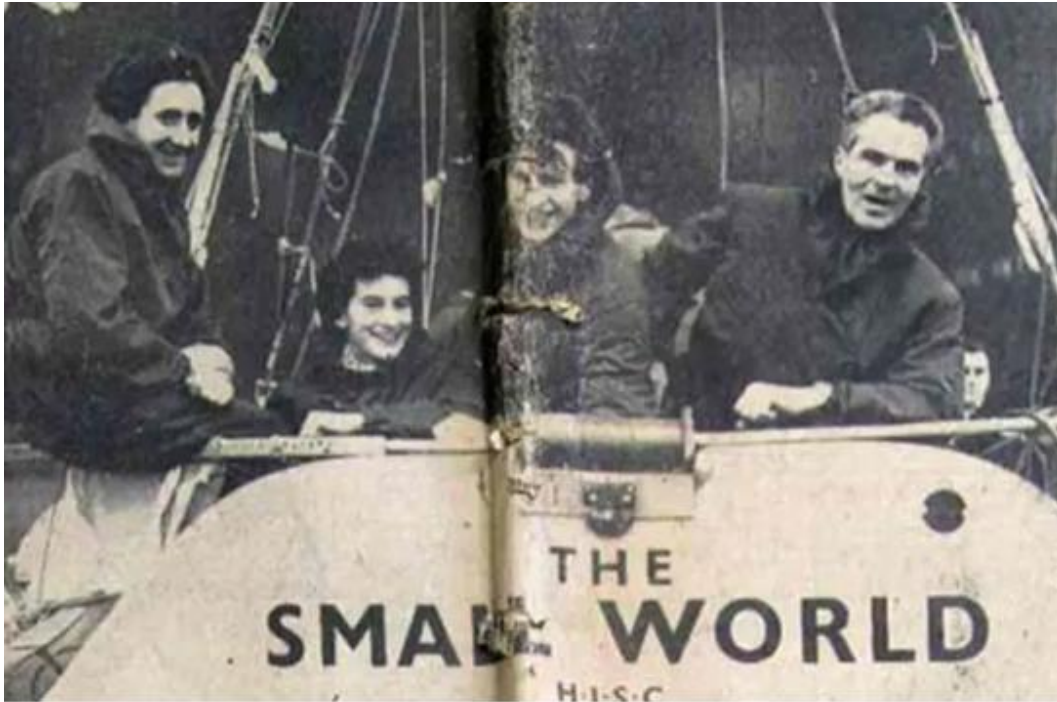
At 900 ft. the altimeter light failed. As I cried out in frustration at being unable to see, Bushy shouted, “We are out of the cloud, I can see the water.” Calmly he waited until we were just a few feet above the waves, then pulled the release string, and we thumped on to the sea. Our balloon, freed from our weight, whipped into a cloud, never to be seen again.

After a record 94 1/2 hours in the air our ballooning was finished. Bushy, captain in the air, handed over his command to Colin now we were at sea. Colin had hurt his ankle on impact but otherwise we were safe and sound, though sick with exhaustion, emotion, and the roughness of the sea. Fifteen hundred miles lay between us and Barbados, but as sailing people we felt this was a more familiar element, and once the shock of parting with our balloon was over, we settled down to an uncomfortable but not too hazardous voyage, making about 75 miles a day. We had plenty of food and a sufficient supply of water. We rationed ourselves to half a pint each a day, keeping a small reserve in case the voyage took longer than we had estimated. We also had a small supply of silver nitrite salts which combine with sea water to produce drinkable water.

Our existence became one of steering, sleep and thoughts of cool liquids. We saw two ships and a submarine, but none apparently saw us. We spent Christmas day mending a broken tiller and on December 29 Tim’s birthday was celebrated, but not wildly. With limited water we ate very little, and everything was an effort. We had faith in Colin’s navigation, but he was

cautious. At last he said we might see a light that night, if we were where he thought.

And we did. Next dawn showed the green island of Barbados, just where it should be. By tea-time our Small World was at anchor and we were ashore facing a tumultuous welcome from the delightful Barbadians, and a meal of soup, fish, fresh fruit, and bottles and bottles of cool drinks. Our sea-air voyage of “four days up and twenty days down was over.”



*From left: Colin Mudie, his wife Rosemary Mudie, Tim Eiloart and his father Bushy Eiloart.*

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## 4. The Cambridge Consultants Story

*The following chapter was archived in 2021, with acknowledgement and thanks, from the Business Weekly website at [www.businessweekly.co.uk](http://www.businessweekly.co.uk). It was written by Tony Quested and was published in February 2011.*

### **Cambridge Consultants the golden child of the tech cluster**

Arguably the most significant contributor to the Cambridge Phenomenon and additionally the kudos Cambridge has gained globally has been the technology design hothouse, Cambridge Consultants, which launched in 1960.

The aim of the founders, Tim Eiloart and David Southward, was to “put the brains of Cambridge University at the disposal of the problems of British industry.”

As a concept and soundbite it’s right up there with the grandest ever conjured by entrepreneurs down the ages.

In reality, the early years of Cambridge Consultants were often chaotic and wracked with commercial uncertainty.

Business Weekly’s historic 5050 Vision publication, which marked the company’s 50th anniversary and effectively the golden jubilee of the Cambridge technology cluster, follows Cambridge Consultants’ plunge into a financial crisis despite the help of Clive Sinclair and Robert Maxwell; the buy-out of the business from voluntary administration by American giants Arthur D. Little; the growth from humble, often chaotic, conditions into a prestigious Cambridge Science Park HQ and the ascendancy to a world-class consultancy that has now lasted over half a century.

Given the company’s current ‘rude’ health this is far from a cradle to the grave account: In its 50 years, Cambridge Consultants has spun off companies that are world leaders in their own right as well as enterprises that have founded entire technology clusters to boost Cambridge’s global kudos and local GDP.

Eiloart was actually better off than many budding Cambridge entrepreneurs and while studying at Trinity had amassed £400 to start the business, unveiling the concept to a group of friends at his bedsit in Ram Yard.

The foundling – oft floundering – business decided it needed offices and found them in Park Street where the landlord was comedian Peter Cook who lived upstairs with many others. When the ‘Cook commune’ wanted to go in or out, the occupant of the company’s only office chair would have to move to let them through.

The business as a consultancy really started to take off as the workshop expanded and more and more projects were taken in for external customers. The company's capabilities also broadened as more bright people came on board.

But the company's cutting edge innovation was not hauling in the cash and by 1971 it became obvious that a buyer was needed. US company Arthur D. Little swooped and Cambridge Consultants' fortunes were transformed.

The company sold its Bar Hill premises in August 1977 and commissioned a new building around 50 per cent larger at Cambridge Science Park – christened by wags in the company, The Milton Hilton. The move coincided with a fresh surge of growth in the business

It's been quite a ride for a company that can fairly be described as both the mother and father of the Cambridge Phenomenon: From one full time employee at the outset in 1960 to 350 today; from receivership to redemption under American ownership and onto fresh global growth through a management buy-out backed by Altran, Europe's largest tech consultancy, in 2002. And looking to the future with confidence as one of the world's most innovative product development companies.

Many of the hi-tech companies in and around Cambridge can trace their roots back to Cambridge Consultants. The wireless and inkjet clusters, particularly, owe a huge debt to Cambridge Consultants and its spin-outs.

Cambridge Consultants has created over 20 new ventures in the past 25 years, several of which have gone on to achieve listing on the London Stock Exchange, namely Domino, Xaar, Prelude Trust, CSR plc and Vivid (sold to Vectura Group).

Other successful spin-offs include Alphamosaic and Inca, who were subsequently acquired by Broadcom for \$123m and Dainippon Screen for Euro 43.8m, respectively. Both sales were achieved within five years of the companies being formed.

The company's portfolio spans a range of different industry sectors. Its Medical Technology Division develops products and technology for drug delivery (respiratory, transdermal, injection, etc), diagnostics (both lab-based and point-of-care devices), and surgical and interventional device manufacturers.

Cambridge Consultants is working with EBR Systems Inc in California on development of a lead-less pacemaker technology for heart surgery. As evidenced by product recalls and civil suits in America, the presence of leads in pacemakers has its drawbacks in terms of reliability.

Some medical sources predict that lead failure rates could reach 30 per cent in the next four years. The leads connecting to a pacemaker can fail or break; EBR Systems is using ultrasonic energy to create a lead-less solution. This involves shining ultrasonic energy onto an electrode that is implanted in the heart and converts the acoustic energy into electricity.

Doctors can therefore connect an electrode inside the heart without having to use leads. Wireless surgery in a number of medical areas promises to be not only safer but also cheaper as it will cut the cost of operations.

Cambridge Consultants is also homing in on a share of a \$100 billion wireless marketplace with a revolutionary approach to maximising the digital dividend.

Whitespace is the term given to the unused spectrum that exists between television channels in what is known as the TV band in the US. While major players like Google and Microsoft are seeing whitespace as a potential goldmine, Cambridge Consultants is championing a cognitive approach to solving a whitespace dilemma.

New whitespace frequencies authorised in the US by the Federal Communications Commission (FCC), greatly increase the global wireless bandwidth available to computers, set top boxes, laptops, WiFi hot spots and other radio devices that currently use the unlicensed bands at 2.4 and 5 GHz. The dilemma is pre-determining whether a particular spectrum is free. Cambridge Consultants has a solution that could become the way all spectrum is regulated.

Whether the challenge involves wireless solutions, medical or consumer products, the world-leading teams at Cambridge Consultants continue to 'put their brains at the disposal of global industry' to game-changing effect.

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## 5. Cambridge Consultants Today



*The headquarters of Cambridge Consultants, at the Cambridge Science Park, in 2021.*

*Cambridge Consultants described itself on its website in 2021 thus:*

### CREATING MARKET LEADERS

We can help you identify, create and launch highly original products and services that will provide a clear return on investment and long-term sustainable competitive advantage.

### YOUR CHALLENGE, SOLVED

If technology is disrupting your market and you need to respond urgently or if you're already deep into a transformational project but have hit a wall, we will own your challenge and deliver the breakthrough.

### TRUSTED AND PROVEN

For six decades we have successfully helped some of the world's biggest brands and most ambitious startups to realise their most critical technology-based aspirations.

With more than 900 staff, it explains that it completes more than 500 projects a year, and has created for its clients more than 5,000 patents.

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