

Executive Summary

Foreword

The genesis of the book.

Introduction: Helping the Future Take Flight

The Zeronauts are a new breed of innovator, determined to drive problems such as carbon, waste, toxics, and poverty to zero. On the climate front, leading sustainability champions argue the need to cut the carbon intensity of every dollar or euro earned by at least 130 times, suggesting that our economic and business models need to be turned upside down, inside out.

I ZERO: THE NEW BLACK

1 Breaking the Sustainability Barrier

The evidence suggests that most CEOs and other members of the global C-suite so far fail to grasp the nature and scale of what's coming at them. A world of 9 billion people by mid-century will demand fundamental changes in our mindsets, behaviors, cultures, and paradigms. Happily, just as our species broke the Sound Barrier in the 1940s and 1950s, a new breed of innovator, entrepreneur, and investor is lining up to break the Sustainability Barrier.

2 Houston, We Have A(nother) Problem

It may not have been designed that way, but conventional capitalism increasingly looks like a giant Ponzi scheme – where the interests of (at least some) people alive today are wildly favored over those of future generations. The example of soil is used to demonstrate that, without intending to do so, we are in the process of crashing the biosphere.

3 Enter the Zeronauts

Transformational, systemic change is generally driven by unreasonable people – who refuse to take the world as it is as any guide to how it might be in

the future. We introduce the first Zeronaut Roll of Honor, spotlighting 50 pioneers – referring to coverage elsewhere in the book.

II CRACKING THE 1-EARTH CODE

4 Turbulent Teens: Our Detox Decade

The decade to 2020 is set to be our Detox Decade, in which we are forced to abandon unsustainable mindsets, behaviors, and valuation models. Three scenarios are presented: breakdown, change as usual, and breakthrough. We dig into five key domains (the 5Cs) where innovation is taking place: citizens, corporations, cities, countries, and, ultimately, our civilization.

III BREAKING THROUGH

5 The Race to Zero

The power of zero has been trumpeted in various areas of business, notably in relation to zero defects. Here we look at lessons learned in the field of total quality management – and introduce a five-stage “Pathways to Zero” model, running through from the Eureka! discovery moment to the point where a new way of doing things becomes endemic in the economy.

6 Zeronautics 101

Five stepping-stones take transformative change agents from their breakthrough insight to the point where their impact is so evident that it is increasingly taken for granted. Introducing the emerging discipline of Zeronautics, we move through the five stages (the 5Es): Eureka!, experimentation, enterprise, ecosystems, and economy.

7 It's the System that's Stupid

Zeronauts are innovating in an astonishing range of areas, tackling hugely diverse economic, social, environmental, and governance challenges. To give a sense of progress to date, we zero in on five key challenges (the 5Ps): population growth, pandemics, poverty, pollution, and WMD proliferation.

IV BEYOND ZERO

8 Ambassadors from the Future

In order to move from incremental to transformative change, we must embrace wider framings, deeper insights, higher targets, and longer time scales. We

investigate some ways in which leading Zeronauts are pushing change in relevant directions, with cases drawn from a spectrum of human activity – from water profligacy to human genital mutilation. If we learn from these pioneers, the twenty-first century could be our best yet.

9 The Zero Countdown – and Beyond

So, to cut to the chase, what should your board, C-suite, or senior management group do to manage risks – and seize opportunities – created by the Zeronaut agenda? Here are some starter questions that you can pose to your team or wider organization.