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Praise for *Frugal Innovation*

Long practised in developing nations out of sheer necessity, frugal innovation is now becoming a strategic business imperative in developed economies, where consumers demand affordable and sustainable products. The flow of industrial knowledge has thus become a two-way street, where the North and South, East and West learn from and exchange with each other. No business leader in the 21st century can ignore the paradigm shift fully described in this book.

Carlos Ghosn, Chairman and CEO, Renault-Nissan Alliance

Through the comprehensive set of case studies they offer in their new book, Radjou and Prabhu demonstrate that frugal innovation is one of the most critical emerging models of value creation for both businesses and the customers they serve. In a hyper-competitive, resource-constrained world, the companies that will succeed are those that can develop and market new solutions that are resource-light and cost-effective without sacrificing quality. *Frugal Innovation* provides an essential blueprint for how to approach this business imperative the right way.

Indra K. Nooyi, Chairman and CEO, PepsiCo, Inc.

Frugal Innovation distils years of thinking and experimentation into an effective and innovative how-to guide for companies large and small. It should be required reading for executives who want to get to market faster and more efficiently while delivering what customers want.

Beth Comstock, Senior Vice President, Chief Marketing Officer, GE

Frugal Innovation offers valuable insights for business leaders everywhere who are facing a familiar challenge: how to do more with less and generate sustainable value for customers, shareholders and society. To stay relevant in an increasingly digital world, organisations must embrace a frugal approach to innovation in order to increase productivity and agility, create competitive advantage and ultimately fuel growth.

Pierre Nanterme, Chairman & CEO, Accenture

Radjou and Prabhu's *Jugaad Innovation* challenged the top-down Western approach to innovation by offering an agile, bottom-up model. *Frugal Innovation* moves this further and faster forward. The practical roadmap and numerous cases in this book find the beat of the new customer-led world order - where velocity, synergy, empathy and involvement come as standard. The future will be about doing more with less, and here we see how.

Kevin Roberts, CEO Worldwide, Saatchi & Saatchi

Radjou and Prabhu show the benefits of viewing resource limitations as an opportunity. In our increasingly resource-constrained world, consumers are demanding affordable, high-quality products that are environmentally friendly and socially inclusive – and numerous innovators are already obliging them. *Frugal Innovation* insightfully articulates how Western companies can evolve to capture opportunities presented by the burgeoning “do more with less” economy.

Dominic Barton, Global Managing Director, McKinsey & Company

In a world of budget cuts where we all strive to do “more for less”, Radjou and Prabhu provide real practical examples of how we can all learn the lessons of frugal innovation. They successfully draw out the wider social and environmental benefits of frugal innovation and the concept of “prosumers” in a way that is both engaging and practical. A great read.

Iain Gray, Chief Executive, Innovate UK

An excellent and bang up-to-date primer on how to do innovation cheaply, quickly, flexibly and with close attention to users and customers – approaches which are, perhaps surprisingly, diametrically opposite to the ways in which so much innovation is organised today.

Geoff Mulgan, CEO, NESTA

Frugal innovation is an idea whose time has come. Downward pressures on cost and the need to use resources sustainably demand this new approach to innovation. In this seminal book, Radjou and Prabhu explain clearly how frugal innovation works and illustrate their case with a host of practical examples from companies around the world. They have captured the wave of the future.

Sir Michael Barber, Chief Education Advisor, Pearson

Frugal Innovation offers a compelling path forward for small and large companies striving to cost-effectively develop products and services of high quality that deliver real value to customers.

*Jennifer Tescher, President and CEO,
Center for Financial Services Innovation*

Frugal innovation is a critical business strategy for companies to prosper in a world where customers are both value-conscious and values-oriented. It challenges Western companies to create high-quality products that are affordable and sustainable as well as desirable and meaningful for end-users.

Carol L. Cone, Global Chair, Edelman Business + Social Purpose

Radjou and Prabhu offer a clarion call for leaders in mature organisations to rethink and reinvent their fundamental approach to innovation by drawing upon the smarts of their people rather than the riches of their organisations. *Frugal Innovation* shows how established companies can stay relevant by learning to think and act like challengers again.

Liz Wiseman, Thinkers50: Top 10 leadership thinker and author of Wall Street Journal bestsellers Multipliers and Rookie Smarts

The certainties of rising consumption in the 20th century are gone. Austerity, aspiration, personalisation and planetary limits all demand that we take a new approach to business. But what should it be? Radjou and Prabhu paint a vivid picture of how business can blend values and quality to deliver the personal and social balance that 21st-century consumers want.

Mike Barry, Director of Sustainable Business (Plan A) at Marks and Spencer

With the cost of R&D increasing year on year, it is important for pharmaceutical companies to keep a focus on ensuring positive returns from investment in R&D and innovation. To be successful requires R&D to be organised differently, in ways that simultaneously improve both effectiveness and efficiency – an approach we at GSK are taking. *Frugal Innovation* is a timely book that provides insightful and practical guidance to firms trying to do more with less.

Stephen Mayhew, Head, R&D Strategy Development, GSK

At Thinkers50 we have been following the development of the ideas of Radjou and Prabhu for some time. They are exciting because they challenge many fundamental assumptions about how and why companies innovate; and they are important because frugal innovation is an idea of and for our times. This book will accelerate the re-invention of how we understand and practise innovation.

Stuart Crainer and Des Dearlove, founders, Thinkers50

Health care may be the global sector most urgently in need of Radjou and Prabhu's insights in *Frugal Innovation*. Aging populations and surging demand for affordable services confront health-care leaders everywhere with a stark reality: innovation must be harnessed to create massive, sustainable improvements in health delivery systems without crippling economic growth. *Frugal Innovation* sets forth a compelling roadmap for delivering better care at lower cost for more people.

Molly Coye, MD, Chief Innovation Officer, UCLA Health

Frugal Innovation is a tour d'horizon of a changing economy. The authors make a compelling case for a feedback-rich economy that is restorative and regenerative rather than extractive, heading for the "upcycle". There is real economic and business advantage to be had through a system change approach, and the authors are to be congratulated for their stimulating guide to the future.

The Ellen MacArthur Foundation

Frugal Innovation is a must-read for corporate leaders around the world facing pressure to create high-quality products using limited resources. Radjou and Prabhu convincingly show that it is possible for companies to “do better with less”.

*Tango Matsumoto, Corporate Executive Officer, EVP,
Head of Global Marketing, Fujitsu Limited*

Businesses have to innovate in an increasingly resource-constrained environment. Addressing clients' pain points and dreams in a frugal way requires a focus on simplicity and agility. This book gives many suggestions on how to do this well.

*Sophie Vandebroek, chief technology officer, Xerox
and president of Xerox Innovation Group*

Frugal Innovation holds important insights for companies across sectors wishing to do more with less. The book is of great relevance to the financial services industry and banks like Barclays that are working with new technologies and start-ups to help customers manage their finances better.

*Elisabetta Osta, Managing Director, Design Office Information,
Insight & Innovation Team, Barclays Bank*

In *Frugal Innovation*, Radjou and Prabhu show how the lessons from developing countries are starting to make a real impact on the innovation processes of established companies in the West. This book nicely describes these transformations and some of the difficulties encountered, and lists practical solutions for companies who want to do more innovation with less, no matter where you are in the world.

*Henry Chesbrough, Faculty Director, Garwood Center for
Corporate Innovation at UC Berkeley's Haas School of Business,
and author, Open Innovation*

Frugal Innovation proposes a breakthrough approach to solving some of the most complex issues of our global economy as it empowers human beings to use their creativity to generate economic and social value while preserving the environment. A must-read for thought leaders and practitioners worldwide.

*Bruno Roche, Special Adviser to the G20 French Presidency Mission on Social Justice
& Globalisation; and Chief Economist, Mars Incorporated*

**The
Economist**

FRUGAL INNOVATION

How to do more with less

Navi Radjou and Jaideep Prabhu

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To all the frugal innovators out there who are every day making the world a better place for everyone.

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Foreword

by Paul Polman, CEO, Unilever

IN A WORLD INCREASINGLY CHARACTERISED AS VUCA – volatile, uncertain, complex and ambiguous – few things are assured. There is one thing however of which we can be relatively certain: that the insatiable demand for ever higher quality products will continue to rise while at the same time the availability of the resources needed to satisfy that demand will remain constrained.

Reconciling this apparent conflict is rapidly emerging as one of the biggest business challenges of our age. Doing more with less can no longer be a short-term response to difficult economic conditions. It has to become an essential long-term business strategy. Businesses that recognise this new reality stand to prosper. Those that continue to live in denial will surely perish.

Yet recognising the new reality and preparing effectively for it are two very different things, which is where this excellent book comes in; Radjou and Prabhu demonstrate how – and why – the concept of frugal innovation has moved seamlessly from management school slogan to boardroom priority. Through a series of case studies they provide unequivocal evidence of why the “age of austerity” can become the “age of opportunity” for those willing to approach innovation in a very different way.

They start with an innate understanding of what people want. First, quality. People are not willing to compromise on the taste or the performance of the products they buy – and increasingly they cannot afford to; having to buy an alternative or replacement product is an expensive mistake they will not make twice.

Second, value. The demand for value is greater than ever, but this need not mean low cost, as the authors show. People are willing to pay

for innovations that add value rather than just giving value. Launching an innovative premium jelly bouillon into a highly competitive market at the height of austerity, for example, might not have been thought the wisest move. Yet with people eating out less, the demand for high-quality convenience products that enable people to cook at home has grown. As a result, Knorr Stock Pots are now in 36 markets and have grown at five times the rate of the overall bouillon market.

Third, purpose. Increasingly people expect companies to use their ability to innovate in a way that addresses the biggest challenges we face around social inclusion and the sustainability of our planet. Business can no longer remain on the sidelines. It has an obligation and – as Radjou and Prabhu demonstrate – a clear opportunity to use its innovative capacity to develop solutions. This is the thinking at the heart of the Unilever Sustainable Living Plan and our business agenda at Unilever. It is a total value chain approach, as highlighted in the Unilever case study (see pages 94–7), but one that finds its greatest resonance at the level of our brands, such as Dove, Lifebuoy, Domestos, Knorr, Signal and the many others infused with a strong social mission and deep sense of purpose. To address people’s growing demand for quality, value and purpose, it’s not enough for companies to just do more with less; they must learn to do *better* with less.

Perhaps the greatest insight from this book is the extent to which we are not just living in a VUCA world, but in a world increasingly turned on its head. Traditional business models in the West need to be revisited. Poverty is prevalent today in many parts of Europe. That’s why we need to apply to European markets the principles of frugal innovation that were used to develop more affordable products at key price points for emerging and aspiring markets. In Spain, for example, our Surf detergent brand sells in packages with as few as five washes; and in Greece, our mayonnaise is available in small packets as well as large jars. Ultimately, as the authors highlight, by combining the frugal ingenuity of developing nations with the advanced R&D capabilities of advanced economies, companies can create high-quality products and services that are affordable, sustainable, and benefit humanity as a whole. This work provides the essential roadmap for those wishing to navigate this new world.

Frugal innovation is an idea – and a book – whose time has come.

Preface

FRUGAL INNOVATION is the ability to “do more with less” – that is, to create significantly more business and social value while minimising the use of diminishing resources such as energy, capital and time. In this “age of scarcity”, Western companies are facing growing pressure from cost-conscious and eco-aware customers, employees and governments, who are demanding affordable, sustainable and high-quality products. Frugal innovation is therefore a game-changing business strategy. But it is more than a strategy: it denotes a new frame of mind, one that sees resource constraints as an opportunity, not a liability.

In April 2012, after four years of research, our book *Jugaad Innovation* was published. It led readers into backroom innovation labs in developing countries such as India, China, Brazil and Kenya to examine the roots of this frugal mindset. (*Jugaad* is a Hindi word meaning an innovative fix or an improvised solution born from ingenuity and cleverness.) It showed how inventive entrepreneurs and firms in resource-constrained emerging markets concoct frugal solutions such as a fridge that consumes no electricity, a bicycle that converts road bumps into acceleration energy to run faster, or a mobile-based service that allows users to send and receive money without having a bank account.

Since the publication of *Jugaad Innovation*, there has been an explosion of interest in frugal innovation for *developed* economies. Corporate leaders and policymakers in the US, Europe and Japan are eager to understand how to do more with less. This has led them to fundamentally rethink how they operate, build and deliver products and services, interact with customers and citizens, and create greater value for themselves and society while preserving the environment.

This book identifies the best practices drawn from our studies of frugal pioneers in the US, Europe and Japan across sectors including manufacturing, retail, financial services, health care and education. It takes readers deep inside developed-world businesses and industries that are already reaping the benefits of frugal innovation. Pioneering companies such as Aetna, Fujitsu, General Electric (GE), GlaxoSmithKline (GSK), Pearson, PepsiCo, Renault-Nissan, Siemens and Unilever are striving to embed frugal processes and, most importantly, a frugal mindset in their organisations.

To achieve dramatic gains in cost efficiency, speed and agility, companies need to rebuild their innovation engines. This will present different challenges for different industries and functions, but six general principles are relevant to all industries and companies. Chapter 1 provides an overview of the socio-economic factors in developed nations that have given rise to frugal innovation, and how and why Western consumers have embraced frugal thinking. Chapters 2-7 look at the six frugal principles, and how companies have adopted and profited from them:

- **Engage and iterate.** Chapter 2 lays out the first principle of frugal innovation: engage and iterate (E&I). Rather than using insular research and development (R&D) departments that rely on educated guesses about customer needs, E&I starts with customers, observing their behaviour in their natural environment, and then considers how products can be made as relevant as possible, going back and forth between the customer and the lab to refine designs. Using case studies of frugal pioneers such as Arla Foods, Fujitsu, GE, GSK, Intuit and SNCF, it shows how R&D managers and marketing executives can embed this customer-centric principle within their organisations.
- **Flex your assets.** Chapter 3 explains how customers are becoming ever more demanding. They increasingly want tailored products and services where and when they desire. It describes the trend towards mass customisation, and how new tools (such as robotics and 3D printers) and new approaches (such as social manufacturing and continuous production) can help operations and supply chain managers “flex” their production, logistics and

service assets to satisfy demanding customers better and more cheaply. It draws on examples from cars (BMW and Volkswagen), pharmaceuticals (GSK and Novartis), cement (Cemex), soft drinks (Coca-Cola) and energy (GDF-Suez and GE). The goal of flexing assets is not only about saving resources, such as carrying less inventory, but also about saving time – a business’s most valuable resource. Studies of Saatchi & Saatchi + Duke and W.L. Gore reveal how managers can draw out the most from their staff by creating a simpler and more agile organisation.

- **Create sustainable solutions.** Chapter 4 demonstrates how companies can implement sustainable practices such as “cradle-to-cradle” (where components and materials are repeatedly recycled) in the design and manufacture of waste-free products. Based on case studies of Kingfisher, Levi Strauss, method, Tarkett and Unilever, the chapter provides insights into how R&D and manufacturing managers can develop self-sustaining solutions that help both businesses and the environment.
- **Shape customer behaviour.** Drawing on research in psychology and behavioural economics, as well as on the pioneering work of organisations such as Barclays, IKEA, Khan Academy, Nest and Progressive, Chapter 5 shows how companies can influence consumers into behaving differently (for example, driving less or more safely) and feeling richer while consuming less. It also shows how marketing managers can improve brand loyalty and market share by tailoring frugal products and services more closely to the way customers actually think, feel and behave – and by properly positioning and communicating the aspirational value of these frugal solutions.
- **Co-create value with prosumers.** Chapter 6 looks at ways consumers – especially the tech-savvy millennial generation (those born between 1982 and 2004) – are evolving from passive individual users into communities of empowered “prosumers”, who collectively design, create and share the products and services they want. As a result, R&D and marketing leaders at firms like Auchan are working with do-it-yourself (DIY) and crowdsourcing pioneers, such as TechShop and Quirky, to bolster

and harness the collective ingenuity and skills of consumer communities. Additionally, big brands such as IKEA are linking up with start-ups such as Airbnb to develop a “sharing economy” in which consumers share goods and services. The chapter also outlines how sales and marketing managers can build greater brand affinity and deepen their engagement with customers by co-creating greater value for all.

- **Make innovative friends.** Firms such as GE and Ford are ensuring that the R&D function is lean, flexible and highly networked. Chapter 7 shows how R&D and operations managers can develop frugal products, services and business models more efficiently by collaborating with diverse external partners (such as suppliers, universities, venture capitalists and start-ups) than by working alone.

Chapter 8 discusses how firms can foster a frugal innovation culture. It shows how leaders of companies such as Aetna, Danone, IBM, Kingfisher, Marks & Spencer, PepsiCo, Renault-Nissan, Siemens and Unilever are radically changing the culture of their organisations – and altering employees’ thinking too – as they strive to implement the six principles of frugal innovation. In doing so, these pioneering companies are rewriting the rules of the game – and even changing the game entirely – in their respective industries.

The chapter contains guidelines to help senior managers identify and prioritise the principles they can implement to achieve better results faster. It provides this guidance from within a change management framework that outlines the what, how, and why of adopting a frugal innovation culture within a company. Lastly, the chapter addresses how functional leaders in charge of R&D, strategy, manufacturing, finance, operations, marketing and sales can individually and collectively foster a frugal innovation culture within their firms.

But first, let us begin by looking at the disruptive nature of a frugal strategy when implemented in a traditional multinational company used to operating in Western markets; and see why so many more established companies feel compelled to follow the same path.

Navi Radjou and Jaideep Prabhu

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