

Megatrends and How to Survive Them

Megatrends and How to Survive Them:

Preparing for 2032

By

Patricia Lustig and Gill Ringland

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This book builds on our experience of working with many organisations over the past decade, and conversations with many people who have shared their insights. We cannot mention them all and so have chickened out from trying to thank them individually. However, the contribution of our networks of colleagues and the many clients with whom we have worked will be visible. You know who you are. Thank you all.

This book has involved colleagues (and friends) from across all regions of the globe and with an age range from 14 to 85. But the first acknowledgements should be to our families who have suffered through the two authors' discussions on the scope, nature and presentation of this book. Thank you for your patience and endless cups of coffee!

Then we want to thank the four people who had faith that we could write this book, Jonathan Blanchard Smith, Sir David Brown, Professor Ted Fuller and Professor Michael Mainelli. Thank you for your encouragement!

We thank our reviewers who read the draft and gave us their feedback. Their comments and suggestions resulted in a vastly improved book. These were in alphabetic order: Brendan Barrett, Jonathan Blanchard Smith, Zbigniew Bochniarz, Sam Cacher, Pasquale DeMuro, Marc-Henry De Jong, Varda Derwig, Martin Duckworth, Cindy Frewen, Janet Godsell, Caroline Gratrix, Prabhu Guptara, Richard Hames, Martin Hazell, Marianne Henkel, Tanja Hichert, Hamilton Hinds, Robert Hoffman, Claudia Kelly, Grazyna Lesniak-Lebkowska, Bruce Lloyd, Willem Londeman, David Lye, Sheila Millward, Rudi Moll, Paul Moxey, Julian Owens, Alex Orr, Misha Pemberthy, Danielle Piniero, Liz Potter, Julia Rebholz, Neantro Saavedra-Rivano, Shameem Siddiqi, Teddy Schultz, Wendy Schultz, Nicola Skinner, David Smith, Chris Van der Walt, Laura Watts, Kresse Wesling, Huw Williams. Thank you for your thoughtful and insightful comments and suggestions!

As ever, errors and omissions are due to the authors.

PRAISE FOR THE BOOK

“Patricia and Gill present a visionary model of megatrends and intersectional complexities that are influencing our lives at all levels as a new decade of change unfolds. Insightful and informative, it paints a vivid picture of the ‘writing on the wall’, making it easier for entrepreneurs and organisations to better understand their unique place and path in a dynamic present and a challenging future.”

Dr Harbeen Arora,

Global Chairperson, All Ladies League (ALL); Women Economic Forum (WEF); Founder, BIOAYURVEDA, India

“I think laying out both interpretations of the trends really helps shape a more nuanced understanding. At any given point, we have the potential to move forward in both a positive and negative direction. The positive and the negative will co-exist forever, but the challenge we face is which one spreads across the greater part of the planet. We need to be constantly vigilant about the possibility of negative trends being exacerbated, which is why this book could make an important contribution.”

Brendan F.D. Barrett

Specially Appointed Professor, Center for the Study of Co-Design, Osaka University, Japan

“I was very pleasantly surprised about how readable this book really is—it will make excellent reading for a wide audience especially anyone with an interest in the future of our beautiful planet. Readers will find the book’s statistics and projections give them an unfair advantage in a discussion about where it’s all going, down the line.”

Jim Bignal

Founder Director, Ethical Reading, UK

“Over the last two years, The Natural Resources Forum has examined many issues facing the extractives industries. It is genuinely useful to have a book such as this, providing a considered and effective framework for thinking about the issues that will face not only our industries, but all business, in the future.”

J. Blanchard Smith

Chairman, Natural Resources Forum, UK

“There have been many publications raising the megatrends issue, but this book is a unique one because of the following features: first, it provides an executive response not only to how to survive them but also how to take advantage of them for business development. Second, the “magic” date 2032—the year of possible power change in China and the USA. It has been written in an easy style without unnecessary comment. I regard it as very useful, particularly for busy people.

Dr Zbigniew Bochniarz

Affiliated Professor, Kozminski University, Warsaw and Evans School of Public Policy and Governance, University of Washington, Seattle; Fellow of the World Academy of Arts & Science

“If only all management books were as accessible to busy decision makers as this one. It gets straight into the crunchy stuff, avoids the flowery prose that finds its way into so many of the books with which it will compete for shelf space, and doesn’t pontificate. It never feels like the authors are trying to teach readers their world view, or indeed to persuade readers of anything other than that they should select the questions that they think are relevant to them and get to grips with answering them. In a nutshell, immediately valuable and refreshingly easy to navigate.”

Sir David Brown

Engineer and Industrialist, UK

“This book provides readers with the latest thinking on the global trends that leaders in organisations, institutions and governments need to be aware of and apply. These trends can be customised and incorporated into guiding principles for decision making. The book provides insights and next-generation thinking, for input as people, work and social structures continue to evolve, in the context of the many aspects of globalisation and technology.”

Julia Flower

Organisation Design Practitioner and Board Trustee-Organisation Design Institute, UK

“This clearly written book selects some of the more strongly evident global changes mainly arising from social, economic and technological developments. Each chapter curates a range of evidence demonstrating particular trends and asserts the views of the authors about the strength and significance of the trends identified. It also provides a guide to develop strategic foresight from exploring further the implications of the trends presented. While strategy should never be done in a hurry, this book will help people to orientate their futures thinking in relation to the sustainability of their organisations.”

Ted Fuller

Professor of Entrepreneurship and Strategic Foresight, University of Lincoln, UK; Editor in Chief of Futures Journal

“Overall, very good material, and very well put: simply written, well organised, balanced, comprehensive, and well rounded.”

Professor Prabhu Guptara

Distinguished Professor of Global Business, Management and Public Policy, William Carey University, India; Board Member, Institute of Management, University of St Gallen, Switzerland

“Many books have been written about the major forces impacting our world today-some well-informed, others less so. But this fascinating book is in a class of its own. And it actually doesn’t matter whether you agree or disagree with the mega trends identified by the authors. For what Lustig and Ringland offer here, in their own accessible and highly insightful manner, actually transcends literal analysis-offering practical pathways through the most intricate of the dynamic patterns shaping our collective future.”

Richard Hames

Executive Director, Centre for the Future, Australia

“It is not often that a book is comprehensive and immensely practical at the same time; this book is both and more. It will add value to any decision-maker, for any enterprise, because the authors share their vast experience in such a useful hands-on manner covering the issues that really matter for the future. We all need better ways of dealing with systemic, interrelated global trends disrupting our world; this book shows how—use it, now, it is excellent!”

Tanja Hichert

Co-Founder, Foresight for Development, South Africa

“E.O. Wilson wrote, “In the twenty-first century, the world will not be run by those who possess mere information alone.... We are drowning in information, while starving for wisdom. The world will henceforth be run

by synthesizers, those able to put together the right information at the right time, think critically about it, and make important choices wisely." This is such a work. I like your book very much—it is just right for the targeted readers. Concise, but provocative. It covers a lot of ground and raises questions all of which need to be asked by all those in executive positions."

Dr Robert Hoffman

Principal and Founder whatIf? Technologies Inc., Canada; Fellow of the World Academy of Arts & Science; Member of the Club of Rome

"To prepare for the future of humanitarian action, it is vital to consider political, social and economic context. The interaction of major trends articulated in this book presents a complex landscape for humanitarian NGOs. Population migration has the potential to impact the scope of disasters, access to survivors and availability of resources to aid relief delivery and protection strategies. Similarly, the way the humanitarian system is supported financially will be impacted by changes in technology, which also have the potential to improve response efficiency and increase grassroots involvement in relief efforts. Consideration of the big-picture is vital, it can help us to become better at responding to emergencies and saving lives in a changing world. This book provides a meaningful vehicle for framing these reflections."

Claudia Kelly

Cash-Transfer Programming Specialist, INGO, USA

"Until quite recently a debate within 'the humanitarian sector'—those with roles and responsibilities for dealing with disasters and emergencies—centred on whether humanitarian crises were aberrant phenomena or reflections of "normal life". Though this book is not about the humanitarian sector, per se, it brings to the fore the importance of looking at crises and ways to anticipate and mitigate them through a "normal life" perspective. Without attempting to predict the future, the authors offer a range of compelling factors that are likely to have transformative impacts on what they call the multipolar world in 2032. These, they suggest, can amongst other things, result in various types of crisis drivers such as conflicts, mass migration and pandemics. Similar to decision-makers and strategic planners in the business community, those in the humanitarian sector need to focus on and test their assumptions based upon plausible trends from a normal life perspective; and, in a readily accessible way, this is what this book has provided."

Dr Randolph Kent

Visiting Professor, African Leadership Centre, King's College London

“Gill Ringland and her colleagues have been my ‘go to’ source for insight into future trends for many years. In our, at times, volatile and unpredictable world, this book is both timely and gives valuable food for thought to help navigate the path ahead.”

Francesca Lagerberg
Grant Thornton

“Everyone is interested in the future, and everyone does strategy these days. But relatively few are aware of the invaluable contribution that comes from the Foresight/Future Studies ‘industry’. This readable and relevant book, written by two practitioners, attempts to fill that gap. Of course, we don’t know what is going to happen in the future, but the level of uncertainty differs from area/decision to area, and there is much that can be done to reduce uncertainty in virtually every area. This is a book for all decision takers who are interested in improving the quality of their decisions. It is both an introduction to the subject for new comers, as well as being a refresher for the more experienced. Twelve key trends are explored in individual chapters which end with questions for readers to ask themselves. This book is not the last word on the subject. Nothing ever is! But it is an invaluable starting point, especially if used effectively.”

Dr Bruce Lloyd
Emeritus Professor of Strategy Management, London South Bank University, UK

“This book is a very interesting read about the multifaceted and increasingly complex contemporary global business environment. It is not meant to be an in-depth technical academic analysis of issues; it is an interesting account of new and anticipated developments about the global business environment-population growth, migration, shifting global values, changing socio-economic structure, income distribution, increasing human aspirations and the host of factors that shape business strategy. The authors have done an excellent job of explaining complicated issues in very simple and well synthesised manner, easily accessible to all. I believe this book will prove highly valuable for current and aspiring business leaders.

Kul B Luintel
Professor of Economics, Cardiff Business School, Wales

“Dealing with the big issues of our time isn’t easy. Business and government love putting off till tomorrow what should be addressed today. However, Patricia and Gill have produced the essential mega-compendium for handling mega-trends. They are both deft and fun, guides to today’s

wicked problems. This book should be an essential reference for anyone who needs practical advice on how to handle strategic and scenario planning in real organisations.”

Professor Michael Mainelli

Executive Chairman, Z/Yen Group, UK; Author of “The Price of Fish”

“It’s always a challenge to deal with change and with the uncertainties of the future. Sometimes not knowing where to start induces a paralysis. What things should I look at? What if I miss something? And how do I work my way through the issues? In this very accessible book the authors solve all those problems simultaneously. A judiciously chosen set of trends that are taking us into the future; the links between those changes drawn out-so that even if you choose only a few to analyse, you’ll be able to tackle a wide range of implications; a handy set of questions to help you look at all the angles that might affect your business or area of policy. And all written in a sharp, well evidenced way. My personal favourite was the chapter on values. Surely one of the real revelations of recent years is that values themselves trend over time. Any sense that we might have had of living in a world of shared or neutral values seems now like a transient moment of either consensus or naivety. Reflecting on where values are trending next is certainly something to keep me busy for a while to come.”

Ronan Palmer

Director, Strategy and Policy, Ofwat, UK

“So much is happening, in an increasingly unstable and unpredictable world, that it’s hard to see what change might hit next year, never mind longer term-but as organisations, we have to plan for the longer term. This book is vital-a compass, that generously distils so much analysis of current trends into a useable format. It is thought-provoking, challenging, and above all enabling-buy it, use it, identify and think hard about which trends will most affect you, and set your path for the longer term, with this book as a really helpful tool.”

Liz Potter

Chair, Curo Housing Group, UK

“A compelling read that is a natural progression to the authors’ earlier books on Scenario Planning and Strategic Foresight. As a businessman operating in Zimbabwe, the insights the book gives on factors affecting future business in Africa has already given invaluable input to my company’s planning.”

Edward A Schultz

Managing Director, RM Pressing (private) Ltd, Bulawayo

“Aha, I have been looking for this!” I thought as I read this very relevant and timely book. It has a good balance of research, case studies and scenarios. While it focuses on the trends up to the year 2032, it enables readers to see and understand things far beyond. It flows very well and is full of much useful information, along with guidance for readers to help them think and explore further. The book is highly recommended for people of every profession who think about, and want to prepare for, the future.”

M. Shameem Siddiqi

Social Development Specialist; Researcher & Writer, Dhaka, Bangladesh

“The idea of planning a long-term strategy and painstakingly executing it over time is based on two implicit assumptions. First, that we have a pretty good idea of what the longer term might look like. Second, that there is a modicum of stability in the business environment. In today’s world neither of these assumptions holds true. Business strategies need to be fluid and adaptable to ever more rapid change. They need to be driven by higher order considerations of purpose and values and turn into short, adaptable and ever-moving sets of bridges between purpose and operational excellence to sustainably create value on the long term.

This new condition of strategy requires senior executives to look at their organisations from the outside in and to develop a deep understanding of the systemic and structural trends that create both business risk and opportunity. This book gives guidance in developing such understanding. Lustig and Ringland provide a useful and accessible overview of 12 megatrends to help frame conversations, to help executives develop such strategies and to give non-executives a framework to challenge them.”

Ron Soonieus

Managing Partner of Camunico, The Netherlands; Executive in Residence at INSEAD, Paris, France

“The holy grail for many foresight practitioners is to support decision-makers in engaging with the future, so that they can make better informed decisions today—regardless of how much they know about scenario-planning or strategic foresight. Gill and Patricia have authored a very user-friendly and helpful book that does exactly that. As a readily accessible and relevant introduction to support long-term thinking, SOIF will certainly be using it with the organisations we work with internationally, from multilateral 2030 global goals conversations at the UN to discussions in local communities.”

Cat Tully

Director, School of International Futures, UK

CHAPTER ONE

INTRODUCTION

As General Eisenhower said, “Plans are useless, but planning is essential.”

This is a book for decision makers in organisations, who would like to improve their planning and the quality of their decisions.

The world seems very chaotic at the moment. As we write, headlines overturn many of our assumptions almost daily. How can organisations make decisions? The only way that we know is by taking account of the systemic long-term trends that are happening. These trends may often erupt as apparently chaotic events.

In this book we provide a description of the systemic global trends that are disrupting organisations now. Sometimes it is hard to spot major changes as they unfold around us. But these trends are happening now and have effects both now and in the longer term.

For instance:

- Today more than half of us live in cities. A large number of recent migrants to cities live in informal settlements. This may show up in the headlines as “Small boats sinking in the Mediterranean”, as migrants are loaded into boats that are not adequate for the journey.
- Family structures are changing. The number of children that people are having is reducing, and the number of generations alive at one time in the same family is increasing. This shows up in the headlines as “Grannies left to roast in the summer.”
- Increasing population and middle-class lifestyles put stress on water supplies. Behind the headlines, rivers are heavily polluted and are drying up, with Asia particularly affected. There is an underlying trend of climate change/droughts in areas where there are also fast growing informal settlements. This shows up in headlines, “Water restrictions now at 60 litres a day” as seen in Cape Town.

Why read this book?

“We considered the trends that were important for us. One was clearly the changing nature of the workforce and organisational structures and hence of our clients. This meant that we could restructure our services to align with this new social and economic environment.”

CEO, Professional Services firm

“Our image of our clients was of a child in a *rural* economy. The understanding that more than 50% of the world’s population live in cities and that many of our clients will be in informal settlements without families made us rethink many of our approaches. For instance, while they may lack family support, they are more likely to have access to education and electricity. This changes how we work with them.”

Strategy Director, International NGO

Shifting values – generational differences

Working with a group of senior healthcare professionals, we (PL) explored the underlying trends affecting healthcare. To our surprise and theirs, the trend that the professionals focused on as having the most significance for how they delivered healthcare was the generational shift. This also led to an insight that they had to consider how they communicated, designed and delivered training to both staff and patients. This meant that they had to tailor different approaches for different generations.

These examples are all from very different industries. What they have in common is that a discussion of the underlying trends allowed a group of people or management team to recognise a pattern which was important to the future of their organisation.

These quotes above and the framework that we provide below all come out of our work with over 40 organisations over the past 3 years. This work invariably involves workshops with the Board, Senior Management Team, or a delegated Task Force.

And what we find is that organisations often focus on a single trend which is really going to dominate them or stress their business model. The group considers the implications of that in some detail before moving on to consider the effect of other trends.

This process has led us to developing this set of 12 megatrends to help frame conversations.

What is a trend?

A trend is not a forecast – it's a direction of travel.

Figure 1-1 Trends are not forecasts

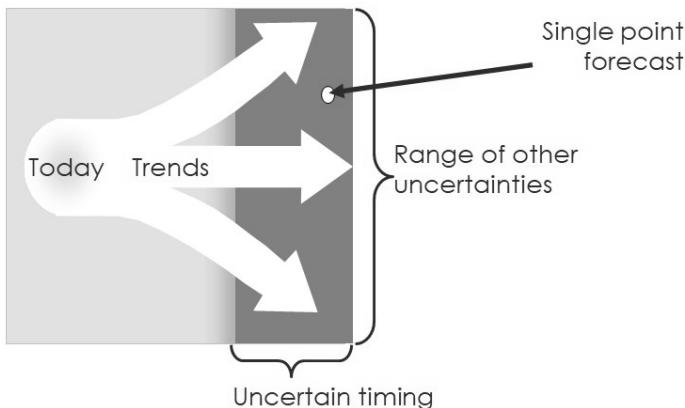


Diagram ©Ringland, Sparrow & Lustig, *Beyond Crisis*, John Wiley 2010 ¹

We find that organisations often need to get beyond their 3-5 year planning cycles but are concerned about wasting time in exploring fascinating ideas from headlines, that will not affect them in the next decade.

We often hear people talking about 2050 or 2100 when they talk about the future. The things they imagine, we don't discuss. There are many things we haven't included in this book, like maglevs under the sea, or commercial mass space travel and tourism, or replicators (as in Star Trek) to 3D print our food. We are looking closer in time than 2100, so we base our discussion on evidence, on extrapolation of long term trends that can be identified now.

Why long-term trends?

The evidence for correlation between long term thinking and better performance of organisations is now significant.

A major McKinsey report “Focusing Capital on the Long-Term” showed that, across a range of industry sectors, for large and mid-cap USA listed companies, those companies with a long-term orientation have performed significantly better over the last decade. This was across a host of measures—revenues, earnings, profit, and market capitalisation.

A seven-year longitudinal study measuring the impact of “future preparedness” and its effect on a firm’s performance has been completed by Professor René Rohrbeck. He found that firms that were future prepared had a one third higher profitability and twice the growth of market capitalisation compared with the average.

By using the trends that we have laid out in this book, you’ll have a framework for long-term thinking and making more sense of the current confusion. This will help you to make better decisions. It will give your organisation a better chance of surviving the disruptions between now and 2032.

Why 2032?

These global megatrends have an impact now and will clearly continue beyond 2032, but 2032 makes a convenient reference point. We choose 2032 because on current arrangements 2032-33 will likely see elections for new Politburo Members in China, and a new President in the USA. So, 2032 could be an interesting year because there may well be changes of leadership emerging in both the USA and China. In Chapter 7 *Multi-Polar Worldview*, we discuss whether new global powers will have emerged over our timeframe—but much of the next decade is likely to be dominated by these two powers.

In considering 2032, remember that a lot can happen in 14 years. Think back to what life was like in 2004.

For instance:

- This was before it was normal for family members to use videoconferencing between continents on a regular basis.
- 2004 was before Al Gore’s film, *An Inconvenient Truth*, which alerted large numbers of people to climate change.
- 2004 was before immigration from the Global South hit the headlines in the USA and Europe.

Now imagine the potential for similar changes going forward. There will be some in the timescale we are working with.

12 Global Megatrends

We have chosen 12 Global Megatrends. Why these trends and why 12?

These trends have evolved through our work, and our understanding of the main things out of MANY that will affect us all. We have chosen a set of 12 trends as our framework, this is because we find that the groups that we work with can think about and discuss up to 12 trends. They can then select those most important for them, out of the set of 12.

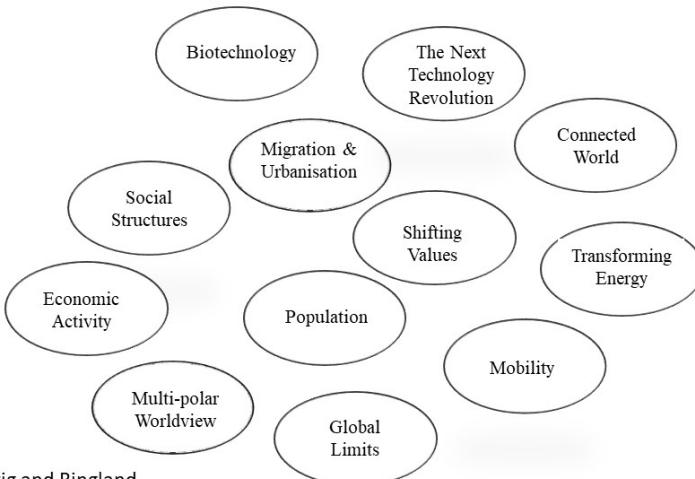
We could have chosen other sets of trends. For instance, Al Gore used a set of six major trends focused on climate change, to explore his climate change agenda. Others use seven trends, or card decks focused on different industries. Our 12 broad megatrends are chosen as likely to affect all of us. An underlying theme behind all our 12 trends is that today, more people than ever before, all over the world, are able to make choices—in life style, in where and how to live. People's choices are driving innovation, society and the economy.

The first trend is population—there are now four times as many people as a century ago, living longer and in different family structures. Most people are above the basic poverty line and are able to exercise choices—they have personal aims which differ across generations—they are able to migrate, underpinning the growth of cities. Now that more than the half of us live in cities we face new challenges of creating social structures that can work across cultures and with new family structures. Economic growth continues, and we face limits on the earth's capacity to provide resources, for instance water. Regulation is less effective as the world sheds the Washington consensus and becomes multi-polar and is further stretched by new models of mobility and energy supply, by the importance of ICT and other global infrastructures, by battles over ownership and security of data, by the changes in jobs due to A.I., and by the potential benefits of biotechnology.

There is good evidence behind these trends. They are based on a range of sources from UN organisations to individual surveys and our own scans of environmental data.

However, we aren't forecasting any particular future. A key part to about thinking about the future is exploring the potential impacts of trends. We've done some of this exploration. But the role of this book is to enable you to explore impacts that we haven't brought out, which are important for your environment. To help you, we provide some questions to aid your exploration of the impact a trend may have in your environment.

Figure 1-2 The 12 trends



©Lustig and Ringland

Models and trends

G.E.P. Box, the famous economist, famously said “all models are wrong; some models are useful”.

The megatrends are of course models. And models are based on assumptions. In each of the chapters we explore a trend, the assumptions that are made, the implications, and the ways in which these assumptions might be overturned.

The other aspect of a trend that you need to take into account is the fact that while trends are not forecasts, they are also central tracks of a spectrum of possible values.

So, with these caveats, we hope that the models are useful.

Clearly, there could be Wild Card events, like President Trump hitting the Red button to target North Korea or a world-wide pandemic, for instance a re-run of Spanish flu... And while security services and governments need to do contingency planning exercises for these, they are outside the scope of business planning for most organisations. Our aim is to help organisations anticipate the mainstream, so we only briefly touch on war, pandemics and catastrophe.

War, Famine and Plague

Most people lived in daily fear of these until recently.

- In agricultural societies on average 15% of people died in wars: so far this century it's 1%.
- In ancient Egypt or medieval India, severe drought could kill 5 or 10% of the population through starvation. In 2014 more than 2.1 billion people were overweight compared with the 850 million who suffered from malnutrition.
- The Black Death in the 1330's killed more than a quarter of the population of Eurasia. The number of people who died or were damaged from HIV may be up to 100 million.

In each chapter we include a short assessment of the effect of that trend on three global threats for this century: war, pandemic and catastrophe (caused by climate change, nuclear or environmental disaster).

How to use this book

Working with trends

After working with many groups, we understand that too much detail is not helpful in working with these trends. As we said above, we have made a choice of 12 Megatrends. There is one chapter per Megatrend.

It is important to recognise that although we have separated each of the trends out for clarity and simplicity, they are all part of the same larger system and so they interact. Each chapter is about a single trend but contains cross references to the most important interconnection(s) to other trends.

The trends that we highlight cover many of the major things happening in the world. You will probably find that a subset of them are most relevant for your environment. So, the way that we suggest you use this book is to read the executive summaries of each chapter first, and then if you think a trend is relevant, read further.

You might find that you want to focus on three or four trends. For each of those we suggest that you explore the questions that we pose at the end of those chapters.

Describing trends

This is a book about trends which are visible now, but perhaps not hitting the headlines. This does not mean that they may not have more effect on you and your organisation than many of the current top headlines. However, there could be news items on all of them, and we use the heading “early indicators” at the end of each chapter to imagine these. These are very explicit possible events or headlines which could become visible in the short term, and which would indicate the direction the trend is taking. These early indicators are an important way of connecting the organisation to perceptions of future directions.

This book teases out some of the positive opportunities arising from each of these trends, because it is only by informed individuals making good decisions, that any of us can thrive in the times until 2032.

It can be hard to envisage the future. So, we've introduced case studies and vignettes to help visualise the impact of these trends. These can be found in boxes – shaded where they are from external sources, white where they are from our personal experience. And where they are from personal experience we either identify ourselves as PL (Patricia) or GR (Gill). Some case studies have web site links shown: these have been specially provided to us by the organisations following our request.

And finally: we also know that trends can be deflected. A trend is a trend until it bends, So, while we provide you with an example of one way they may go, we also discuss deflectors for each trend.

Layout of the book

Each chapter describing a trend begins with an Executive Summary of the trend, its effect by 2032, and a map of related trends, which will help you decide if it is likely to have a large impact on your organisation. This is followed by:

- Why it is important
- How we got here
- Current trends
- Deflections we might see
- How this might affect you by 2032
- What does this mean for you?
- Early indicators (headlines to watch for)
- Finally, we suggest Further Reading.

There will be generalisations in each chapter. So, we have also attempted to tease out some of the differences by geographic region in a table in each chapter.

In Appendix A we define the geographic regions used, and also define the many abbreviations and technical terms used. We need to do this in an Appendix rather than defining them when they first occur, since not everybody will want to read the chapters in sequence. So, we have designed the text so that the chapters can be read independently. We also replicate some useful figures and examples in more than one chapter, for the same reason.

All online references can be found at: <http://www.pearltrees.com/tracialustig/megatrends-survive-preparing/id19676450>.

You will find the references for each chapter under the heading of that chapter.

In the Conclusion we briefly suggest ways of using the book, as well as including some health warnings. One of these warnings is that many people find change threatening. This book shows that the future may be very different from the past. And within organisations, there may be many types of resistance to change.

And we know that reading a book is only the start. So, we provide a few tools to help develop the implications of the trends for your organisation, in Appendix B.

Further Reading

A good background read with statistics backing up some of the information you will find in the different chapters:

Rosling, Hans, et. al., *Factfulness: Ten reasons we're wrong about the world – and why things are better than you think*, Hodder & Stoughton, 2018.

CHAPTER TWO

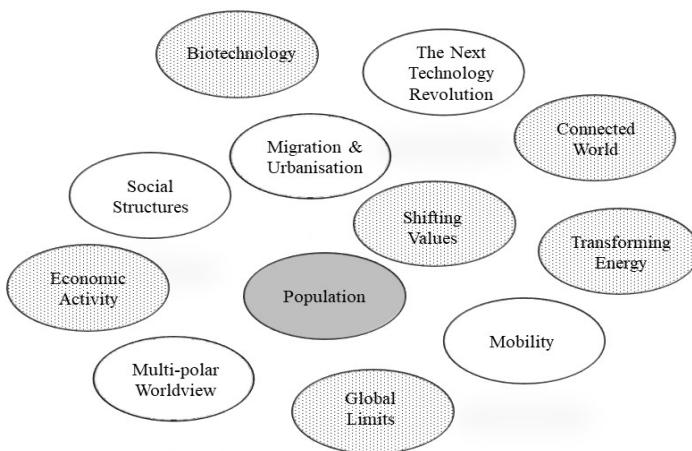
POPULATION

Executive Summary

This trend describes the world population in terms of numbers, geographic distribution, origin, family size, age and employment of people. The numbers are increasing in South Asia and Africa, family sizes and child mortality are generally decreasing, and longevity is increasing.

- World population is increasing with growth mostly in South Asia and Africa.
- There are going to be more old people because public health has improved life expectancy of children and people's longevity.
- Opportunity: the rise in education (particularly of women) helps improve health, life expectancy and well-being.

Figure 2-1 Related trends



Why it is important

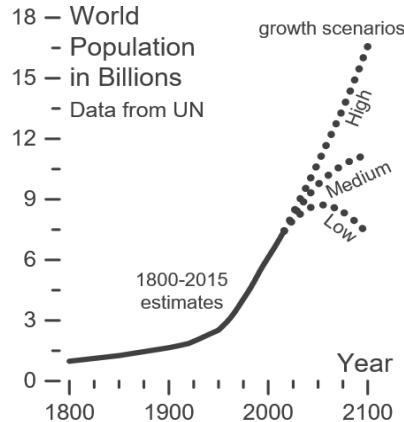
The number of people drives and underpins many of the other trends. People need to live somewhere; many are moving to the cities, so there is a strong link to urbanisation. This is the first time in history that so many generations are alive at the same time. Everyone needs to be fed, clothed and housed, which has an impact on the economy and the resources that are needed. As populations age, more people require support and there are potentially fewer to support them. This may have impacts on the age of retirement and on immigration/migration.

For the first time in history, more than half of the global population are middle class (level three or four, see the Appendix A for a description of the income levels), have choice about their lives, and are no longer focusing on basic needs.

How we got here

In 1927 the world population was 2 billion and today it is over 7 billion.

Figure 2-2 Global population



Source: UNDP

Average life expectancy at birth has steadily been increasing globally from 46 years in 1950 to 71.5 years in 2015. The number of people over the age of 60 is steadily growing.

Different countries have different age structures, due to:

- uneven implementation of health care;
- variations in family planning and changing reproductive behaviour;
- differences in education;
- war, disease and famine caused by global climate change; and
- urbanisation.

The population is growing fastest in the least developed countries. Much of this growth is in urban areas because these often provide better healthcare, infrastructure, education and employment. As women move to urban areas and access education, the number of children they have tends to decrease.

Effect of women's education

Comparison of fertility rates with female literacy in the USA, India as a whole, and Kerala, illustrate the effect of literacy of women. Kerala is in most ways similar to the rest of India, but unusually its state government instituted a policy of universal literacy. The effect is shown in the table below – female literacy correlates with better life expectancy and a lower fertility rate.

Data for year 2000	USA	India	Kerala
Total fertility (children per woman)	2.1	2.9	1.7
Infant mortality (deaths per 1000)	65	58	12
Male life expectancy (years)	75	62	71
Female life expectancy (years)	80	64	76
Female literacy % of adults	99	54	88

The variability in the global population projections in Figure 2-2 is mostly due to uncertainty over family size, i.e. number of births and infant mortality rates. The question is whether and how fast birth rates might decline with female education in the growing cities of Africa and Asia.

Regional differences	Topic	Description
East Asia and Pacific	Population in BN	2.1
	Population growth % pa	0.2
Europe	Population in BN	0.9
	Population growth % pa	-0.5
Latin America	Population in BN	0.6
	Population growth % pa	0.8
Middle East and North Africa	Population in BN	0.7
	Population growth % pa	2.0
North America	Population in BN	0.4
	Population growth % pa	0.7
South Asia	Population in BN	1.8
	Population growth % pa	1.1
Sub-Saharan Africa	Population in BN	0.7
	Population growth % pa	2.3

The figures in the table above are based on UNDP data.

Current trends

Population growth peaked at over 2% between 1965-1970 and has declined to just over 1% between 2010-2015. Population growth is projected to decline further by 2032.

Africa had one in six of the world population in 2012 and is forecast to reach one in four by 2050, mainly due to increased life expectancy rather than increasing birth rates.

Population growth is putting pressure on resources: food, water and raw materials. As people move to urban areas, there is increased pressure on the infrastructure and services that they need to provide for their populations. Migration into urban areas—not just from within a country, but migration from without—also puts a strain on social cohesion, age structure of the population, politics and religious balance.

In the global north, health and social systems are under strain. As the elderly start to outnumber the workforce, rising costs are no longer balanced by tax revenues. Also, the number of people available to provide social and health care cannot meet demand, except if incomers augment the work force.

In the global north, populations are stabilising or falling. Population growth is concentrated in the poorest countries which makes it hard for those countries to eradicate poverty, reduce inequality, combat hunger and malnutrition, expand and update education and health systems and improve basic services so that ‘no one is left behind.’