



The value of alternative stories in scenario planning

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Abstract. Scenario planning has increased in use due to the possibility of considering multiple futures that include social, technological, economic, and political challenges. Alternative stories present improbable and dramatic twists that help answer the question “What if?” while proposing multiple explorations about potential trends and developments. With the objective of establishing the value of alternative stories about the future to develop strategies, this article reviews and analyzes the use of alternative stories in scenario planning. Within the analysis, examples and cases of scenario planning in different countries and sectors are introduced, as well as the historical aspects of scenario planning, the use of alternative stories, and alternate history. Furthermore, visual elements, such as comparative tables, explore similarities and differences in the use of alternative stories in scenario planning. A brief presentation of how alternative stories can be used in uncertain times, such as the COVID-19 pandemic, is also integrated into the work, as well as a proposal of how alternative history could be used to complement scenarios.

Keywords: Scenario planning, Alternative stories, Alternative/Alternate history, Narrative, Strategy, Future

Introduction

Uncertainty is an inevitable part of growth and development. The same social structures cannot withstand the forces of change, and some are even disappearing. It is a continuous succession of new beginnings, transformations, and reconstructions that have been grouped into what has been designated as the post-structural era [1, 2]. Life itself has developed into a series of relatively connected phases in which certainties have become blurred, more fragile, and less reliable [3].

Speed is one aspect of adaptation, often emphasized as critical for success in turbulent environments. The other aspect of adaptation is the ability to handle complexity [4]. Times are changing in unprecedented ways, and they are becoming more brittle and less trustworthy, uncovering a reality in which previous social structures are no longer valid [5].

The best-known conceptualization of change is that of the VUCA times. The acronym refers to times that are volatile, uncertain, complex, and ambiguous. The American militia initially conceived the VUCA times to describe the new world order after the Cold War, becoming a guideline for understanding a changing global world [6, 7]. The era has been referred to as a new reality that is destructive, impulsive, and unpredictable, one in which ubiquitous, continuous, and dynamic changes are all pervasive in organizations.

Societies worldwide have gone through, and are still going through, what have been called uncertain, exponential, seismic, chaotic, and turbulent times. “The magnitude of the economic, political, social, environmental, and technological changes encountered by nearly every organization in the world is unprecedented” [8]. Uncertainty has become the only certain thing; it is the new norm. The COVID-19 pandemic has contributed and even increased these conditions as it has put the world in a state of shock that goes

beyond volatility, uncertainty, complexity, and ambiguity, forcing governments, businesses, and people around the world into an experiment that included health responses, new ways of working, and new social behaviors such as confinement.

The new era has been deeply marked by the politics of paranoia, resulting in a philosophy of suspicion and a culture of terror leading to the disruption of critical power [9]. In part, these mindsets are the result of information saturation, as more information equals more uncertainty because complete information is rare [10].

In this context, there is one thing that has become undeniable in organizations, this environment calls for different and innovative planning strategies that incorporate the unknowns and the unknowables in a way that allows to contemplate diverse alternatives and prepare for them. Scenario planning is a storytelling discipline that compels attention and promotes retention through a recount of events, and it can be considered as a powerful communication tool through history [11]. It is a method for analyzing possibilities and coping with uncertainty and unpredictability [12] by challenging current paradigms of thinking through the use of a series of stories [13]. As such, scenario planning has become a convenient method to organize, anticipate, and project. It allows people to think strategically to generate better outcomes, considering different situations that might help or hinder the plan [14], developing and presenting possible, dramatic, and improbable twists, and incorporating both a short and long-term vision.

There is a wide variety of reasons to undertake scenario planning, including improving the quality of strategic dialogue [15], decision-making, and strategy planning and implementation [16], incentivizing leaders to see situations in an unfamiliar way, stretching mental models [17,

18], promoting prospective sense-making [19], encouraging respect for different perspectives, and contributing to organizational learning [20, 21]. However, scenarios are not recommended when uncertainty is so great that they cannot be built reliably [22], because infinite new combinations of uncertainties can lead to being paralyzed by the multitude of possibilities [14]. Rafael Ramirez, Trudi Lang, and Gayle Peterson conceptualize bad scenarios as including one or more of the following: failure to identify the user and use of the scenarios in a way that makes them vague and generic; misconception of any probable event in a radically uncertain context in terms of scenarios; adulteration of the scenarios by fusing them with the strategy one pursues; belief that scenarios can be constructed with little or no thought at all; common use of scenarios as predictive tools; and the assumption that scenarios are merely stories that can be built with any and every hypothesis [23].

Considering its limitations, one approach to implementing this type of methodology is resourcing to alternative stories. Answering the question “What if?” is crucial in strategy development and decision making, which is why alternative stories, as a part of scenario planning, are at the center of areas such as project management, risk and crisis management, public policy design, and innovation, among others.

The power of stories lies in allowing us to interpret the world. Stories involve a temporal sequencing of events that can be organized thematically or chronologically [24]. Scenarios need to be written as convincing stories that describe a broad range of alternative futures relevant to an organization’s success [25]. In this sense, scenario planning relates to alternative history as the latter also involves developing new visions of the future within a series of imagined and crafted worlds [26] that emerge from hypothetical

scenarios that flow from the negated outcomes or events [27]. Scenarios are memorable because they are based on stories that can be considered an image or a map of the possible future. Titles or names need to be short, catchy, snappy, and memorable. According to Charles Roxburgh [22], playing on film titles and historical events is recommended, such as “Groundhog Day”, “The Long Chill”, “Perfect Summer”, “Silver Age”, or “Mexican Spring” [28].

Alternative stories are particularly useful in developing strategies to navigate extreme events, allowing strategists to steer the course between the false certainty of a single forecast [22]. Scenarios are built from a rigorous analysis of data and imagination, providing a framework to understand complexity and uncertainty by challenging conventional wisdom [8, 22, 29]. In this sense, the proximity between scenarios and alternative history lies in the idea of blurring the boundaries between fact and fiction [30].

This article presents a review, introducing examples from different countries and fields where scenario planning has been put into effect to identify the common ground among them and the particular characteristics that differentiate some approaches from the others. The purpose is to ascertain the benefits that alternative stories and alternate history bring to strategic planning through the development of scenarios that provide insights into what could happen in the future and how individuals, businesses, societies, and countries can prepare to face whatever is coming their way.

2. Background

2.1 A brief history of scenario planning

The history of scenario planning can be traced back to military planning and war games [22]. In the 19th century, the principles of strategic

planning were first formulated, evolving into scenario techniques and simulations that have been employed by military strategists throughout history [31]. Later, these methods started to be used by Rand Corporation in the 1950s and '60s to explore how a nuclear war might erupt between the United States of America and the Soviet Union [32].

During the 1960s and '70s, the methodology was adapted to be used in industrial settings. General Electric and Royal Dutch Shell are some of the most remarkable examples of the transition of scenario planning into the business world [22, 33]. Thinking ahead and planning for multiple possible outcomes became a way for companies worldwide to further their ambitions and develop new and better processes to fulfill future demands, visualized through the use of alternative stories.

In this sense, the idea of “future now” thinking, which was introduced by Herman Kahn, became a common practice where a detailed analysis of possible futures, plus a lot of imagination, resulted in a new way of planning and strategizing. Later on, the writer Leo Rosten suggested using the concept of scenarios, based on Hollywood terminology, to describe the development and use of alternative stories [32].

Scenario planning has been increasingly recommended as a tool to improve decision-making processes. Its use has progressed, becoming embedded in strategic management discourse and praxis [11]. Scenarios are based on the postulate that the world is unpredictable [34], and they assist people in acknowledging the importance of reflecting on the uncertainties that lie ahead. Scenario planning can help leaders think more prospectively about what could happen in the future in order to prepare to face those situations [35].

2.2 Scenario building

Scenarios are formulated according to what we know about how the present conditions emerge. However, empirical evidence of the past cannot determine the future [36]. “They are useful tools when the future does not seem to be a linear projection of the past” [35], and there are emerging and growing trends that make it difficult to anticipate with certainty what the future will be like.

It is important to state that the purpose of scenarios is not to predict the future or get the future right [13], but to display how certain conditions could influence and shape it. They are hypothetical, but causally coherent, descriptions of the possibilities the future holds [37, 38]. “Scenarios are rich, data-driven stories about tomorrow that address important choices we have to make now” [8]. They represent plausible alternatives of how the world may develop [39] with the intent of setting out an objective vision of potential versions of the future.

Scenario writers understand that surprise, contingency, and deviations from the trend line are the rule, not the exception; among scenario writers, context matters [40]. The methodology of scenarios uses a few contrasting prospects to explore the uncertainty surrounding the future consequences of a decision [41]. Scenarios should be created in sets of at least two to diminish expectations of future prediction and facilitate decision-making processes by considering alternative outcomes [20], and do not have to be mutually exclusive; divergent scenarios might play out simultaneously in different parts of the world, sectors, or population groups [35].

Good scenarios are plausible, relevant, and lead to new insights, which determines their credibility. They are directed towards the problems that organizations experience in the present while offering solutions for the future [36]. Scenarios aim to illuminate and explore differ-

ent ways the future might realistically develop [42]. They embody the need to think about the future in a meaningful and structured way to prepare for multiple outcomes [36].

As stated by Jeremy Mariton [14], identifying the driving forces includes analyzing shifts in society, politics, the economy, and technological developments, and how they could impact the outcome of an organization. The critical uncertainties are derived from those driving forces and are considered to be those that represent a higher risk or opportunity. Developing plausible scenarios involves forming a matrix with two critical uncertainties as the axis and focusing on possible outcomes for each combination. Finally, discussing the implications and paths entails developing the impact of each scenario in a deeper manner. This is one of the most effective ways to build solid scenarios and part of the reason why most scenario planning exercises consist of four alternative futures; however, the focal issue, the relevant timeframe, and the driving forces behind each planning exercise might result in more or fewer scenarios, depending on the possible combinations between them.

2.3 Alternative history and scenario planning

Alternative history aids in the goal of determining the value of scenario planning by providing a framework that allows to fictionalize the counterfactuals that are embedded in historical thinking [43]. In doing so, imagining the possibilities of what could have been helps broaden the horizons regarding what could be. Future narratives, like the ones used in scenario planning, can be considered as alternative histories non-past parallels [44]. Both occur in the space of what has not happened and thus cannot be empirically verified; they are time-travel exercises to either reflect on the past or visualize the future. The

non-past, as created in alternate history, is intrinsically related to the future [44], which is where it converges with scenario planning.

In other words, one of the uses of alternative histories is establishing where we would be as a society if something had happened differently in the past; on the other hand, scenarios focus on where we could be as a society in the future and how that could or should influence our present [45]. This play on the linearity of time entails that images of the future are inevitably located in the past or are at least inspired by it. Alternate histories, like scenarios, challenge the present and the future through unrealized possibilities for historical change [46], where there is a convergence of ideas of “future pasts” [47], “possible futures in the past”, possible futures that did not come to pass, unrealized possible futures, feared futures, and hoped-for futures of the past [48]. Although alternate histories are set in the past and scenarios are set in the future, they both entail changes in the present.

3. Material and method

3.1 Material

Examples of scenario planning exercises were selected based on their driving forces, main uncertainties, or primary focus in order to provide a comprehensive review of the use of scenarios across different sectors and countries. The selected examples include economic and market changes, financial issues, social and consumer behavior, environmental concerns, social and political contexts, development, and technology; they also cover sectors ranging from specific industries such as oil or air travel to more extensive processes and systems that include higher education, societies, and countries as a whole.

3.2 Method

Based on a literature review as the research method, scenarios are introduced and compared to

depict similarities and differences in the application of alternative stories in multiple settings and conditions. Special attention is given to the way historical analysis, alternative histories, and scenario-planning feed from each other to achieve more integral forecasts and actions.

4. Alternative stories, Alternative History, and Scenario Planning: a transversal review

4.1 Royal Dutch Shell: Possible futures for oil and gas

One of the first documented cases of the use of scenarios in a business context was that of the Royal Dutch Shell company (Shell), which adopted this method as a permanent strategy in the late 1960s. They had been creating and releasing scenarios since the early 1970s [49]. This aimed to analyze the possible business environments that could exist in the future, specifically in 2000, and their consequences [18].

The study revealed that there would be a discontinuity in the oil industry that would disrupt the expansion of companies in this sector of business. In this context, Shell focused on looking ahead to the year 1985, experimenting with scenario planning through what they called “Horizon Planning” [31] to accept the uncertainty of the future of the oil industry and include it in the decision-making process.

The company thought of this methodology as a potentially better scheme to think about the future, rather than relying on the traditional forecast methods that were limited by the idea that today’s world was not going to be that different from tomorrow’s [18]. The initial scenarios developed focused on four main areas surrounding economics, geopolitics, and socio-cultural issues, energy sources and availability, and the environment. Based on these topics, alternative stories

were developed to understand how consumers, governments, energy producers, and regulators were likely to behave and respond to change in the decades ahead.

This strategy aimed to gain insight into how the system to which the company belongs was interconnected, what were the driving forces, what events could shake the system as a whole, and which ones would affect the company the most. In 2005, three scenarios were developed by Shell called “Global Scenarios to 2025” [49]:

- a. Low Trust Globalization: This represents a legalistic “prove it to me” world where there is an absence of market solutions to the crisis of security and trust. Institutional discontinuities limit cross-border economic integration, and managing complex risks, as well as complying with fast-evolving rules, are key challenges.
- b. Open Doors: This describes a pragmatic “know me” world where cross-border integration is encouraged. “Built-in” security and compliance certification are promoted, as well as regulatory harmonization, best-practice codes, and networking.
- c. Flags: This depicts a dogmatic “follow me” world where zero-sum games, regulatory fragmentation, and national preferences put a brake on globalization. Fragmentation is exacerbated, and country-risk management increases in popularity.

4.2 Mont Fleur Scenarios: 1991–1992

The “Mont Fleur” scenario exercise was important because, in the midst of a deep conflict, it brought people together to think creatively about their country’s future [50]. The scenario process was convened in 1991 by Professor Pieter le Roux of the University of the Western Cape and funded

by the German Friedrich Ebert Stiftung Foundation and the Swiss Development Agency [20].

The scenarios were developed in a moment of deep conflict and profound uncertainty during the South African transition. After a review of the contemporary situation in South Africa—that included the release of Nelson Mandela from prison and the unbanning of the African National Congress and South African Communist Party—participants were asked to articulate stories about how they thought the future might unfold in the country over the next decade [20].

This process resulted in thirty different narratives, among which popular revolution, right-wing revolts, and free-market utopias were mentioned. Based on the original outlines, facilitators reduced the thirty stories to nine based on plausibility, logic, and feasibility [51]. Participants reconvened and finally reduced them to four scenarios, considering different birds and the idea of flight as the connecting element to describe them [52]:

- a. Ostrich: A negotiated settlement to the crisis in South Africa is not achieved, and the country's government continues to be non-representative. The National Party government and the business community believe that a deal with their allies could be sufficient instead of negotiating with their opponents.
- b. Lame Duck: A settlement is achieved, but the transition is slow and indecisive. The nature, composition, and rules concerning the Government of National Unity were a central issue in the pre-election negotiations, and the idea of “winner takes all” prevails. A weak coalition government is not able to deliver and cannot last.
- c. Icarus: Transition is rapid, but the new government unwisely pursues unsustainable populist economic policies.

- d. Flight of the Flamingos: The government's policies are sustainable, and the country takes a path of inclusive growth and democracy. Change takes flight, and there is great potential for positive outcomes. There is a commitment to finding a way forward.

The Mont Fleur scenarios are a clear example of advocacy processes [20]. Its success has been well documented and is recognized as a fruitful approach where scenario planning was used to guide social, political, and economic plans to achieve better outcomes [35]. It offered a way to advance alignment through optimism and generate trust in what had been considered an unmanageable situation [52].

4.3 British Airways: 1994-1995

Scenario planning emerged as a response to the recession precipitated by the Gulf War to highlight several issues within the company and discuss the market changes [12]. During the analysis, essential changes in technology, education, world trade, and finances were considered, along with the information revolution, economic restructuring, and global competition. British Airways used the Shell approach to scenario planning to create strategies in light of future uncertainties [12]. Two scenarios were developed in this process [53]:

- a. Wild gardens: It devised a context in which global integration made it impossible to build new governance structures to replace the old crumbling structures. The drivers in this scenario were the market forces, the competition costs, and the need for flexibility.
- b. New structures: It envisioned a situation in which shared values and new ways of organizing were found and enabled manageable growth. The driving forces of this scenario were the search for order, infrastructure investments, and long-time horizons [12].

These scenarios allowed British Airways to react quickly and effectively to a major recession. While the airline industry as a whole lost £10 billion during that period, British Airways remained profitable [12].

4.4 The Zimbabwe scenarios

Zimbabwe faced a series of interconnected political, economic, social, and environmental challenges that resulted in years of polarization, violence, and stagnation. In 2010, Zimbabwean leaders administered the project to influence a democratic and prosperous future. Four scenarios were developed to describe the different alternatives that the country could encounter [54]:

- a. The Stone People: It depicts a story of a government that responds effectively to citizens' needs. It manages to shape the nation by properly addressing socio-economic and political concerns, promoting inclusive governance, and focusing on the efficient exploitation of resources.
- b. The Stimela (the Ndebele word for "locomotive"): It aims to illustrate a leadership that establishes a clear and viable development vision, maintains regional stability, and facilitates an environment conducive to growth. This scenario considers a stabilizing phase on a national level that permeates the political, economic, and social sectors.
- c. The Vulture State: It delineates a context in which the government is loosely connected with the people. This government uses public institutions to fulfill the needs and desires of only certain groups. This scenario assumes that the government acts like a vulture, prioritizing individual economic interests instead of generalized national development.
- d. The Chameleon: It describes some type of coalition government that struggles to propel the nation forward because politicians

remain connected to their partisan and ideological positions that perpetuate economic recession, social crises, and regional conflict.

4.5 UPS: 1997 and 2002 scenarios

In 1997, the company used the planning technique with scenarios to design possible alternative futures based on two areas of interest: the market environment, relating to the flow of products and funds across borders; and the characteristics of demand, which included the nature of consumers, the type of products, and the distribution mechanisms. The project resulted in four scenarios [55]:

- a. Tangled paths: It provided a global context where strong local and regional government regulations restrict the flow of goods. However, as consumers demand more product variations, governments struggle to regulate commerce, and a highly competitive market with many niche players emerges.
- b. Regressive world: It depicted a world dominated by virtual organizations and non-traditional competitors. On a global scale, commerce is generally deregulated, and technology flourishes. At the same time, goods and services are customized for consumers.
- c. Global scale: It described a world with strong local and regional regulations that restrict the flow of goods. Technology constitutes a mix of proprietary systems and limited interchangeability. As there are restrictions to commerce, competition is between more traditional domestic and regional players.
- d. Brave new world: It portrayed a world where most trade is global and deregulated. In terms of technology, proprietary systems dominate, and changes are implemented at a slower pace. Consumer patterns follow traditional pathways, and there is an evident consolidation of competitors within industries.

These scenarios were used to assist the UPS leaders in brainstorming and developing the corporate strategy. Additional material was developed for each story, and videos were filmed to help with the immersion process [49].

4.6 Higher Education in Australia: EY The university of the future 2030

Ernst & Young was involved in a project to help universities see emerging patterns, detect opportunities and threats, and test how current resilient strategies in higher education might lead to new trends. Four scenarios were developed to enlighten education sector leaders about the trends unfolding outside of their area [56]:

- a. **Champion university:** This scenario was the base case. It entailed that universities pursue teaching and research without excessive dependence on the private sector. There is a significant push to increase the quality of education and incorporate more work skills to address the future of work. There is a shift from passive to active teaching institutions.
- b. **Commercial university:** This scenario was considered to be the likely case. Universities operate autonomously. The preference for traditional degrees remains strong. The line between universities and industry blurs. Higher education institutions embrace technology as a way to reduce costs. Research is seen as a lucrative activity.
- c. **Disruptor university:** This particular scenario was viewed as the alternative case. Education as a service transforms the way universities attract and retain students, and continuous learning becomes the dominant segment. Technology is widely used in teaching and learning, with digital business models prevailing.
- d. **Virtual university:** This scenario represents the extreme case. Courses are digital, shorter, and standardized. Shared digital experience platforms prevail, and facilities are repurposed to function as business hubs to promote collaboration, innovation, and community education. The focus of education programs is on customer acquisition and retention.

According to the developers of these four scenarios, their value lies in their ability to stimulate questions and new ways of thinking about education rather than the accuracy of their predictions.

4.7 DHL: Delivering Tomorrow Logistics 2050

The study and projects developed by DHL in 2012 aimed to foster and promote a dialogue about the future of logistics by describing a series of different scenarios for the year 2050. The process was designed and conducted by foresight experts, and five scenarios were developed [8]:

- a. **Untamed Economy - Impending Collapse:** It looks at a world characterized by consumption and sustainable development rejection. Barriers have been eliminated, and global trade has flourished as a result. The economy is propelled by unsustainable lifestyles and uncontrolled exploitation of natural resources. Climate change is uncontrollable, natural disasters occur more often, and they disrupt supply chains. There is an increase in the demand for logistics and transport services.
- b. **Mega-efficiency in Megacities:** It describes a world in which megacities are the main drivers of a paradigm shift towards green growth. Robotics are deeply rooted in the world of production and services, and there are zero-emission automated plants. There are highly efficient traffic approaches that

include underground cargo transport and new options for public transportation. The logistics industry is entrusted to run services in the city.

- c. Customized Lifestyles: It depicts a world where personalized consumption is pervasive, and consumers are empowered to create their own products. This leads to a rise in regional trade streams. Production technologies like 3D printing accelerate the customization trend, increasing energy and raw materials consumption, and contributing further to climate change. The implications for logistics include a reduced need for long-distance transportation.
- d. Paralyzing Protectionism: It illustrates a world where globalization has been reversed. Resources are scarce, which leads to international conflicts over resource deposits. Relations between some countries are strained, and logistics providers act as intermediaries in international trade brokerage. The logistics industry is affected by a decline in world trade.
- e. Global Resilience - Local Adaptation: The world is characterized by a high level of consumption. Climate change is accelerated and catastrophes disrupt supply chains. To face these challenges, there is a shift away from efficiency maximization to resilience. This leads to regionalized trade, which relies on a logistics sector that ensures supply security and high capacity utilization to balance energy efficiency.

4.8 Visual Arts in Liverpool (VAiL)

Visual Arts in Liverpool is a partnership of arts in Liverpool. It was facing a lot of struggles in terms of funding and decided to evaluate different alternatives. Four scenarios were developed [57]:

- a. The New Renaissance, The Arts Ascendant: Describes economic recovery and a positive environment in which art can flourish. The new coalition governs efficiently and the economy starts to grow again. The city reinvented itself with the 2012 Olympic games. VAIL is viewed as a pioneering organization that attracts funding.
- b. The New Rationale, The Arts Transformed: Indicates reform and a new way of working for the arts. In this scenario, the new coalition embarks on an electoral reform. There is political stress and reduction in funding for arts, although not as much as expected. Alliances with different organizations prevail. Art organizations become more entrepreneurial.
- c. Breaking Up, The Arts Fragmented: Describes a tougher decentralized environment where limited funds are hotly contested. In this scenario, there are cuts to expenditure and the arts suffer fund reduction. The city stagnates and there is no clear plan to revitalize the Liverpool City brand.
- d. Doomsday, The Arts Decimated: Shows a picture of severe cuts and the resulting changes in the Arts world. Administrative cuts are done “to the bone”, and funds run dry. Philanthropic activities start to develop, and there is free entry to almost all art-related events. Program variety is sacrificed and the offering becomes populist [57].

4.9 Pandemic scenarios: IMD 2020 Post COVID World

The analysis was made considering virus longevity, global mindset, and digital adoption [58]. The forces analyzed were the global environment, the business landscape, market regulations, innovation trends, and consumer engagement. Four scenarios were developed as a result:

- a. Global marketplace: The virus is present in the short term; there is global acceptance of the problem and digital acceleration. No deeper economic, political, or social problems take root. Everyone wants to get back to business.

b. Digital reset: There is long-term virus longevity, global acceleration, and digital skepticism. Infections and deaths fail to dissipate. Unilateral responses to the problem have failed, and a global response is required. People restrict their exposure to digital media and retreat from overexposure to digital technologies.

c. Back to basics: COVID-19 infections and deaths fail to slow down. People become distrustful about threats and products from the outside. They choose to travel close to home, and global supply chains are dismantled. Digital technologies become too invasive for many people.
- d. Walled gardens: The virus dissipates quickly. Lingering suspicions remain about the dangers of pandemics from foreign lands. Nations prioritize themselves over the global collective good. Local trips and events become more popular. Technology remains pervasive, but people become less interested in global themes.
- 4.10. Collection of selected scenarios

A comparison of the different examples of scenario planning presented throughout this article is introduced in table 1.

As can be observed in table 1, most exercises in scenario planning use four scenarios, which could reflect the use of the driving forces and key uncertainties methodology. The focus of the scenarios is a reflection of the conditions surrounding organizations and governments, as well as the trends that can help or hinder their

Table 1. Scenario comparison

Scenarios	Country	Sector	Focus	Number of scenarios
Royal Dutch Shell Horizon Planning	Netherlands and UK	Oil, energy production	Oil Embargo	3
Mont Fleur Scenarios	South Africa	Politics	Social conflict and unrest, Apartheid	4
British Airways Official Future	UK	Airline	Recession, Gulf War	2
Zimbabwe scenarios	Zimbabwe	Politics	Polarization, violence, stagnation	4
EY The University of the future 2030	Australia	Higher education	Unviable public university model	4
Visual Art in Liverpool (VAiL)	UK	Arts	Factors affecting funding	4
DHL Delivering Tomorrow: Logistics 2050	Germany	Logistics	Trade and consumption patterns, technology, climate change	5
UPS Horizons	United States	International courier	Market environment, demand	4
IMD Post COVID World	Switzerland	Health, business	COVID-19 pandemic and its effects	4

Source: Developed by the authors, 2021

objectives; as it has been stated before, scenarios should have a use and a user, and that helps to determine the reach and considerations for each scenario planning exercise.

The table also shows that scenarios can be used in any sector, from education and business to health and government. Although the motivation for the construction of the different sets of scenarios may vary, which is why their focus can range from general to specific factors, the intent remains the same.

The scenarios set in the business sector mainly focus on demand, market shifts, and consumer behavior; some even include possible changes in the supply of raw materials and logistic processes that could modify the availability of products. In terms of the scenarios that are framed in politics and political systems, the focus tends to be on the relationship with society and the consequences of certain political decisions or actions, as well as their effectiveness.

Some of the more sector-specific scenarios have very particular driving forces and key uncertainties that are unlikely to have a significant impact elsewhere. Nevertheless, this does not mean they are poorly constructed; the use for which scenarios are designed will limit or expand their reach and focal point. It is all about the expectations surrounding the scenario planning exercise.

4.11 Additional examples

Additional examples of scenarios have been developed by international organizations such as the World Economic Forum [35] to identify the future of work. The main drivers that helped develop the scenarios were the rate of technological change and its impact on business models, the evolution of learning among the workforce, and the magnitude of talent mobility. The scenarios are: Workforce autarkies, Mass movement, Robot replacement, Polarized world, Empowered

entrepreneurs, Skilled flows, Productive locals, and Agile adapters.

South Korea developed the “2030 Five scenarios for the future of the nation”. They were based on vivid narratives to provide dramatic insights and symbolic meanings. The key drivers included declining population, aging population, rapid urbanization, growing demand for more energy, decreasing solid fuel and electricity, increasing renewable energy and gas, knowledge-based economy, globalization, global warming, technologies, social network technologies, and applications [59]. The five scenarios were: The Republic of Samsung, Han River Flood in a Warmer South Korea, Big Global Family, the Age of Biotechnology, and Peaceful Unification.

The future of the environment has been analyzed from the perspective of scenarios such as the Great Barrier Reef in Australia [60]. Drivers included demographic change, regional governance and leadership, water availability, climate change, oil and energy, infrastructure, industry, disease, economy, tourism, information and technology, and security [61]. The scenarios were called: Saving the Reef, No limits to growth, Booming sea change, and Revitalized country towns. In Antarctica, a similar process was done creating four scenarios for conservation: Collaborative-conservationist, Collaborative-exploitative, Individualistic-conservationist, and Individualistic-exploitative [62].

Even the future of Brexit has been subject to scenario planning. One of the most known examples is the seven scenarios for Brexit, which are: The withdrawal agreement, Try again, No deal, Referendum, General election, Revoke article 50, and United government [63].

These scenarios are not discussed in detail as they share similar driving forces or key uncertainties with the other scenarios that were presented; however, they are deemed important as

they help in establishing the reach of scenarios. The World Economic Forum scenarios are linked to changes in Higher Education that the EY scenarios include; they also consider factors such as digitalization that are part of the IMD scenarios. The South Korean scenarios resemble the points made in the DHL scenarios, including aspects related to the environment and social behavior. The Great Barrier Reef scenarios are built from driving forces such as the future of oil as a source of energy that is also the catalyst of the Shell scenarios, although with a different perspective. Finally, the Brexit scenarios incorporate uncertainties related to political actions and their social consequences, which is also the approach of the Zimbabwe scenarios.

4.12 Discussion on the contributions alternate history could bring to scenario planning

Considering how alternative history and scenario planning converge by creating alternate versions of events grounded in different degrees of reality [44], the use of alternative histories presents itself as an area of opportunity for the construction of more robust scenarios, opening up the possibilities further. Figure 1 shows how there could be more alternatives to consider by merging both methodologies.

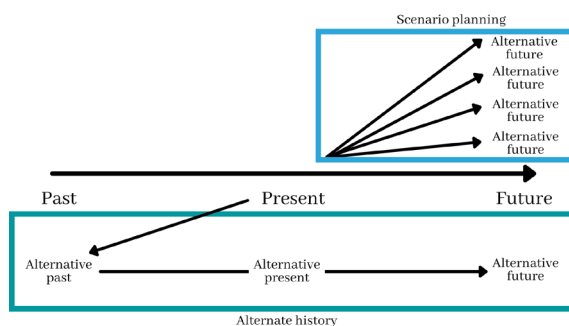


Figure 1. Graphic description of how alternate histories and scenario planning align in time. Developed by the authors, 2021

Dilek Önköl and Shari De Baets argue that people who study or work with elements from history should not leave the future to others, and that scenario planners should embrace history in the same way [45]. Rather than building reactive scenarios, it is essential to learn from alternative analyses or constructions of the past to plan for the future in more proactive and creative ways [45].

In the specific case of the pandemic scenarios, it is evident that they represent a reaction to a situation that has already presented itself. This is a common condition in scenario planning related to the hindsight bias, where events seem more predictable after they have happened than before their occurrence [45]. This is where alternate histories became an advantage in scenario planning exercises. Analyzing past situations can also provide an insight into what the future might hold, and creating different and even utopic outcomes of historical events could provide new and innovative solutions for present and future issues. The IMD scenario builders could have pulled ideas from alternate history novels such as Kim Stanley Robinson's "The Years of Rice and Salt" which presents the aftermath of the black plague [64] in a different light to construct more dramatic yet plausible scenarios.

Following the same line of thought, the Royal Dutch Shell scenarios could have been complemented or by considering alternate history elements such as those described by Harry Turtledove in "The War That Came Early: The Big Switch", which include the possibility of war due to oil embargos or shortages. The scenarios would have kept their focus on economics, geopolitics, socio-cultural issues, energy sources and availability, and the environment, but they could have been enriched in terms of how governments would be likely to respond to change and emerging issues in the future.

5. Future perspectives

This study can be expanded in terms of the number of scenarios analyzed. Further studies can include cultural differences, classifications by date and reach, and text analysis of the different narratives and structures. Additional research can be based on identifying specific strategic planning vocabulary that is common in different scenarios or comparisons between positive and negative scenarios. With alternate histories and alternative stories about the future, the possibilities are endless.

6. Conclusions

Scenarios are used to manage change, and they showcase the true value of alternative stories. Scenario planning helps policy-makers and firms anticipate change, prepare responses, and create more robust strategies. It relies on the precept “expect the best but prepare for the worst”. This methodology can guide a firm to visualize the impact of different scenarios, identify weaknesses, and develop a sense of risk awareness and crisis readiness. Businesses can become proactive versus simply reacting to events.

Scenario planning considers multiple possible futures that include social, technological, economic, and political challenges. Because it consists of analyzing different variants of what could happen, in order to prepare for the uncertainty of the future, alternative stories are at the center of scenario planning. Its relevance lies in the possibility of rehearsing the future to avoid surprises by breaking through the illusion of certainty [55].

Scenario planning has been used as a practical tool for developing alternative cultures and an initial step towards effecting change [65]. It implies the collective participation of experts, strategists, and managers to challenge organizations’ strategic paradigms [66]. They are very flexible and can be applied to almost any policy, business, or project issue.

This article introduced nine different scenario planning exercises that describe 35 alternative stories or future scenarios, plus four additional cases that were briefly described, creating an excellent example of the use of alternative stories in diverse settings. It is important to remember that scenarios enable us to explore the unknowable future and chart a favorable course. However, they are not a tool for making predictions, nor a blueprint or a complete plan to follow; the future remains as unpredictable as ever [67]. Scenarios will not provide the answers to organizational problems but will help executives ask better questions, and they can be re-written as needed. The article also proposes a discussion on how to use alternate histories to complement scenarios and even develop new alternatives.

7. Round Table Insight

During the round table, special attention was given to ethics in games and in scenario development because moral issues in alternative stories and histories can be questioned, providing interesting learning opportunities. Valuable insights into gaming, storytelling, alternative stories, scenario planning, and especially, human connections were provided. Human connection is paramount and is fundamental in both games and storytelling because they have an important role in providing learning conditions, as they constitute ways of communicating knowledge. People love stories and live by them because they are universal and help develop emotional connections. The same is true for games; its use in edutainment activities helps foster empathy, joy, and a sense of accomplishment, which increases interest as participants have fun while fulfilling tasks bringing about enriching solutions.

In this context, scenario planning can be considered as a business game. Consultants, business leaders, and employees play with possibilities and

develop stories in a guessing game and in a game with history, creating an opportunity to escape reality or enter a parallel one. History and science can be used to try to reduce the uncertainty of the future, helping develop decision-making and knowledge acquisition skills. Opportunities are provided for participants to discover and create solutions through collective experiences while understanding the “What ifs” of specific situations.

In recent years, digital gaming has gained traction, primarily due to confinement conditions that resulted from the COVID-19 pandemic. Most business activities, including training, were moved online, creating the need for novel tools and digital games that can be used for scenario planning. Still, some scenario planning or gaming activities cannot be easily transferred into online formats because the hands-on approach would be missing, and since exchanges between people inspire change and build trust, as well as help develop a sense of belonging and positivity.

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