



# UNCOMMON KNOWLEDGE:

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## RARE EARTH METALS, CHINA AND GREEN INNOVATION

A PERSPECTIVE ON RISK MANAGEMENT

### ABSTRACT

If your business interests lie in the development of green technology or in digital photography . . . in space rockets or in washing machines . . . in medical imaging or in a diverse array of other industries, uncommon knowledge is the key to effective risk management practices. Connecting the dots among seemingly disparate elements can create a more successful future by providing deep insights into the real risks and opportunities that lie ahead.



TOFFLER ASSOCIATES

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## RARE EARTH METALS, CHINA AND GREEN INNOVATION A PERSPECTIVE ON RISK MANAGEMENT

### ABSTRACT

If your business interests lie in the development of green technology or in digital photography . . . in space rockets or in washing machines . . . in medical imaging or in any of a diverse array of other industries worth an estimated 5% of the world's GDP, connecting the dots between a group of 17 elements called "rare earths" and China's export policies could avert an operations issue carrying the potential to threaten the very survival of a company, an industry, or even a way of life.

Uncommon knowledge such as this is an essential component of effective risk management in today's world. It is derived through a balance of elements: complex analytical models coupled with creative-strategic insight; financial constructs coupled with upstream "what if" scenarios; historic perspectives coupled with informed views of future possibilities. This powerful combination of practices can improve executive decision-making and create a more successful future by providing deep insights into the real risks and opportunities that lie ahead.

### CURRENT SITUATION

Risk identification, mitigation and management are topics of intense focus in boardrooms and C-suites everywhere today, but conversations are still heavily centered on financial and accounting implications versus the broad range of possibilities encompassing strategic, operational, market, compliance, technology, customer and reputation issues, to name just a few. While public companies have implemented a variety of risk functions

to mitigate the potential for failure or significant loss, these efforts are commonly aligned with the protection of shareholders' financial interests and compliance with the Sarbanes-Oxley Act.

Traditional risk management methodologies are inadequate indicators of future events. Many rely on past history to predict future outcomes. Many are internally focused, biased by corporate culture, beliefs and narrow perspectives that serve to distort the longer-range view of upstream opportunities and threats.

Instead, these approaches should be aligned with the development of successful business strategies, which demand creative, forward-looking thought processes to assess the potential impact of diverse factors such as accelerating change, competitive surprises, political uncertainties, regulatory shifts, security breaches and explosive technological developments. There is a growing need to involve a variety of stakeholders in the identification and assessment of risk, including not only internal contributors but external groups as well, such as suppliers, customers, outside experts and key influencers.

### DIFFERENT APPROACHES

The Alternate Futures methodology created by Toffler Associates is one proven analytical approach that provides multiple layers of deep insights to improve risk identification and executive decision-making across a wide range of possible future scenarios. Its process components include:

#### 1. Defining the Focal Question

- a. What is the business question to be illuminated?

b. What is the context of the question?

## 2. Scanning the Environment

a. What of relevance has changed or may change?

b. What are the features and parameters of the changing environment?

## 3. Testing Fundamental Drivers of Change

a. What are the potential drivers of change affecting the business environment?

b. Which should be selected for testing?

## 4. Developing Alternate Futures

a. What are the dimensions of the risk planning space?

b. What are the relevant alternatives?

## 5. Exploring Risk Implications in Alternate Future Worlds

a. What are the potential risks associated with each Alternate Future?

b. What are the implications associated with these elements of risk?

## 6. Identifying Salient Business Issues

a. What are the challenges to be anticipated?

b. What are the potential ramifications?

The creation of alternate futures is not, in and of itself, a new concept, but Toffler Associates' approach differs from many others in several ways. It incorporates the perspectives of both internal and external stakeholders, resulting in a balanced, objective view of possibilities. It illuminates the alternatives and their respective implications by systematically examining the environment in which each is created. It, therefore, provides a more meaningful context for organizational decisions. Finally, by tapping into the

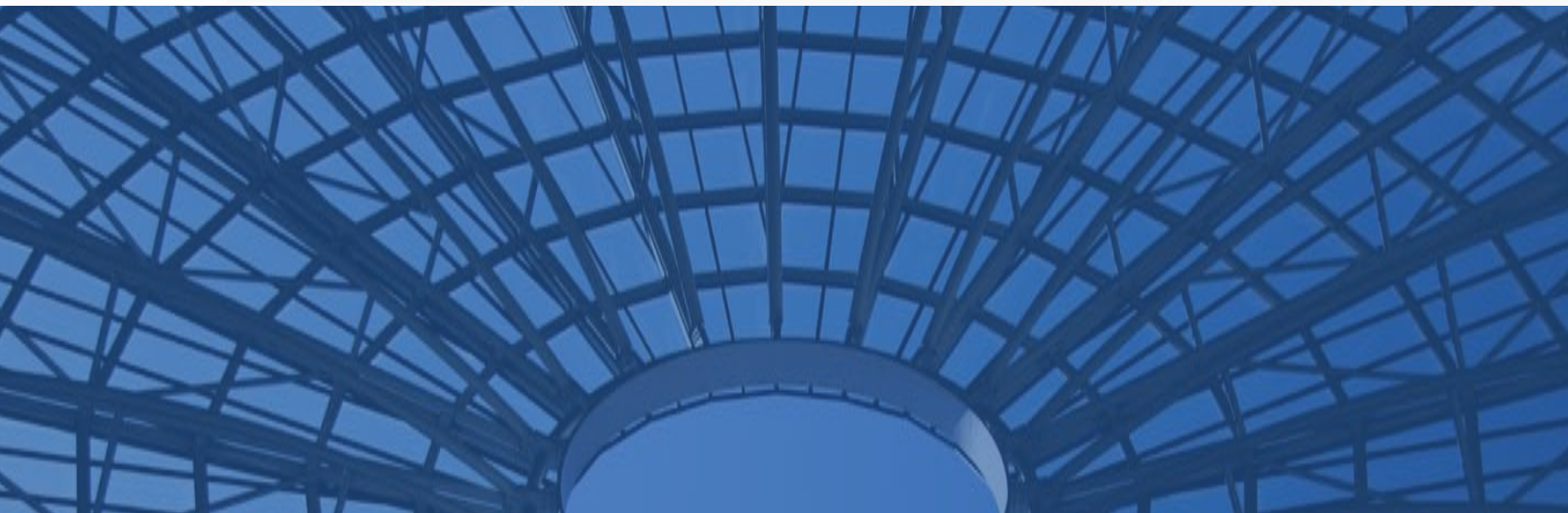
worlds of external stakeholders, it expands the realm of uncertainties to encompass issues that key executives do not recognize, given their more limited and subjective views.

To supplement the **Alternate Futures** approach, many organizations working with Toffler Associates have found business war-gaming to be an effective means of improving risk identification, assessment and management. Employing a proven rigorous process, business war-gaming is a collaborative effort involving key staff members and stakeholders. It is hypothesis driven and results focused, resulting in robust analysis and discussion of "what if" scenarios and their corresponding implications. War-games create safe environments in which executives can experience the risks and consequences of different courses of action or inaction. The effort helps to identify corporate pathologies and to break cultural bias, resulting in a richer, more objective executive decision-making process informed by deep insights into future possibilities.

## SUMMARY

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To reduce the degree of uncertainty between expected and actual outcomes, effective risk management practices require a balance of elements: complex analytical models coupled with creative-strategic insight; financial constructs coupled with upstream "what if" scenarios; historic perspectives coupled with informed views of future possibilities. Through this balanced lens, deep insights into the real risks can be anticipated and understood, risk can be mitigated and opportunities can be realized.



*Toffler Associates is a dynamic, innovative advisory firm that serves as a catalyst for change to create bigger, more successful futures for its clients through transformation design.*

*The nature of change in the work performed by Toffler Associates is transformative because the problems in today's turbulent world are complex. Solutions developed through the transformation design process provide a path to a profitable, sustainable future through actions to be executed today. These actions impact the behavior of individuals, as well as the structure and form of organizations and the systems that support them.*

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