



A Monthly e-Newsletter From:

 Institute for Alternative Futures

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## ***Forward Perspectives***

### **China 2028 Scenarios**

By IAF President [Jonathan Peck](#)

Understanding where China is headed is vitally important to understanding the future of the rest of the world. We are all bound to a shared future that China helps shape with its fast growing economy supporting twenty-percent of the world's population. China is the second largest holder of U.S. government debt with more than [\\$500 billion in treasuries](#). China's future investments will determine what types of innovation remain largely in the West and which move to China. Technological competition and collaboration between China and the rest of the world will drive both the economy and ecology of the world. Every government, business and indeed, person on this planet will be affected by what happens in China.

To better understand the future of this important nation, IAF is developing scenarios for the future of China in collaboration with [Mads Dall](#). Mads Dall is a Danish business expert with extensive experience in China. In early April, Mads Dall predicted that the Olympics would prove a huge success for China. With over [840 million viewers](#) for the opening ceremony alone, that prediction now looks prescient because many people expected stories of protests and smog would wreck China's moment on the world stage. Yet, even after the world moves on from the 2008 Olympiad, China still faces an uncertain future poised between the potential for great success and terrible problems.

IAF is exploring this uncertainty through three China 2028 scenarios that look at the expected future, the desperate future and a high aspiration future. Each scenario addresses common factors such as the business environment, ecology, economy, political system, societal values and demographics. Here is a sampling of forecasts describing some elements in the expected future scenario for China in 2028:

- **Business Environment:** China increasingly enforces intellectual property protections.

Intellectual property is no longer a major international issue. After 2010, foreign companies scramble to take out Chinese patents.

- **Ecology:** Internal migration continues to shift the population from rural areas to China's cities. Environmental refugees flee pollution and water shortages that trouble China. In the more desperate scenario, this problem overwhelms China's government.
- **Economy:** China becomes the world's largest consumer market by 2014. The biggest drivers of economic growth come from tier 2 and tier 3 cities.
- **Political Economy:** Planned investment in key technologies creates Chinese leadership in greentech, biotech, energy, stem cells and nanotech.
- **Society & Demographics:** External migration increases as borders are opened. International migration allows millions of Chinese to live abroad.

Each of the scenarios will offer a valuable tool for businesses, governments and NGOs needing to answer key questions affecting their future. They will help illuminate the conditions for foreign business in China as well as the potential effects China will have on business everywhere. Different sectors need to understand how China will invest in foreign markets and what that will mean for global business prospects. If in the past China seemed far away, now the other side of the world is just around the corner.

Understanding the future of this growing giant will be vital for creating a preferred future for everyone. To learn more about the China 2028 Scenarios, please email me at [jpeck@altfutures.com](mailto:jpeck@altfutures.com).

## ***Trends & Insights***

### **The Coming Osteoporosis Epidemic**

One of the most important demographic trends occurring worldwide is the aging of societies across the developed world. An aging society is almost certain to be characterized by a weakening population as the ravages of thin bone diseases, such as osteoporosis, affects more people.

In the United States, the number of people with osteoporosis is forecast to increase to 14 million by 2020 from about 10 million currently. The foundations for osteoporosis are established early in life although lifestyle, diet and drugs can slow its progression and help prevent fractures. With a rapidly aging population, there are limited strategies for decreasing the forecasted increase in cases of osteoporosis.

A large, and growing, population of citizens with osteoporosis will have a major impact on families, the economy, public policy, and social as well as technological innovation. Some of the expected impacts over the next 20 years include:

- **Societal Impacts:** The demand for caregivers and home health aides will grow beyond the projected supply and drive up prices. Osteoporosis patients will move to urban areas or retirement communities where they can access better care. For families unable to afford regular care at home, there is likely to be a reliance on relatives causing older parents to move closer to their children. Osteoporosis could also accelerate the development of "new families" of people living together under one roof who are not blood relatives, but share a paid caregiver.
- **Technology:** Osteoporosis drugs are often very expensive when they reach the market

due to the large and long clinical trials required by the FDA for proving efficacy and safety. However, the very large market for these drugs means we will likely see many more drugs over the next 20 years designed to prevent fractures. New tests will be developed to catch osteoporosis early where prevention efforts can be the most successful. By 2020, there will be more replacement parts--small bones, wrists, and even spinal disks. However, the surgery for their implant and subsequent care will continue to be expensive.

- **Environment:** The built environment will become more "bone-friendly." Businesses and governments will use new design technologies to build automobiles, highways, furniture, clothing, and other products to minimize accidents or their impact. Airplanes, stadiums, and theaters will have specialized seating for osteoporosis patients. Safe design elevators, staircases, bathtubs, desks and other items should begin to appear in housing and workplaces.
- **Economics Issues:** The economic impact of osteoporosis on our state and federal government will continue to grow. For example, In Florida alone, the annual cost of osteoporosis fractures was \$1.2 billion in 2000 and is estimated to climb to \$2.1 billion by 2025. Hip fractures alone will cost an estimated \$1.6 billion in 2025. The market will be large enough to support a range of osteoporosis focused businesses from nursing homes and single-focus clinics to specialized spas, fitness centers, tours and cruises.

In a business-as-usual scenario, we would see the continued development of more-expensive drugs with a long development timeline and with only incremental improvement in efficacy. Government would debate the osteoporosis epidemic for years, and little action would be taken other than possibly expanding tax deductions for osteoporosis care. Despite some improvements in coverage, many middle-class and poor patients will have little coverage for osteoporosis. However, the vibrant American business sector will provide a range of osteoporosis-related products and services.

While it is too late to prevent a growing epidemic in osteoporosis cases, it is not too late to reduce the severity of the disease in patients and prevent fractures. This will be vital to preventing the negative impacts of the business-as-usual scenario the United States is heading towards. The most effective intervention, especially in younger patients, is in improving diet and exercise. Regular screening, especially for women over 65, is important for capturing the disease early. Prevention efforts combined with better treatment options will be needed over the next 20 years to reduce many of the negative impacts of the coming osteoporosis epidemic.

A longer version of this article, written by IAF Senior Associate [Jay Herson](#), appears in the March-April 2007 edition of the [Futurist](#).

## ***News and Events***

### **IAF Presentations from WFS Available Online**

IAF once again had a fun and informative time with our fellow futurists in D.C. at The World Future Society's annual convention: [WorldFuture 2008 Seeing the World Through New Eyes](#). Slides and workshop materials from IAF events are now available online.

- [Wiser Futures Workshop](#): IAF Founder & Chairman of the Board Clem Bezold as well as IAF Futurists Craig Bettles and Devin Fidler.
- [Health For All and a Health Care System Worth Creating](#): IAF Founder Clem Bezold and

Senior Futurist Bill Rowley.

- [Using Futures in Organizational Strategy](#): IAF Futurists Jonathan Peck, Bill Rowley and Devin Fidler.
- [The Coming Decade in Air Travel, 2020 Visions from Two Blind Seers](#): IAF Senior Associate Jay Herson and David Pearce Snyder of The Snyder Family Enterprise.
- [2021 Vision for Elementary and Middle Schools in a Global Society](#): IAF Futurists Marsha Rhea and Craig Bettles with Elizabeth Carlson from the National Association of Elementary School Principals (NAESP).
- [Key Trends and Uncertainties, Views from Corporate Foresight](#): IAF Founder & Chairman of the Board Clem Bezold with Klaus Heinzlbecker, Director of Strategic Projects at BASF AG and Gereon Uerz, Senior foresight Consultant at Z\_punkt GmbH.

You also can see a short description along with the slides and a copy of the IAF Wiser Futures Compendium [here](#) on the IAF website. IAF looks forward to meeting you at the next WorldFuture Conference in Chicago!

## ***Upcoming Events***

Addressing the Twin Epidemics of Diabetes and Obesity, Tidewater Virginia, IAF Senior Futurist Bill Rowley, September 4th, Virginia Beach.

Features of a Health Care System Worth Creating: Could this be 2019?, George Washington University Interagency Institute for Federal Health Care Executives, IAF Senior Futurist, September 17th, Arlington, VA.

2019 Healthcare that Works for All Forecasts, American Society of Health-System Pharmacists, IAF President Jonathan Peck, September 23rd, Bethesda MD.

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