

TOP FUTURE TRENDS

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1. Education/Self Learning

Workers will require better educations for both skilled and unskilled positions. They will also change careers more often, due to technological advances. These workers will require additional, continuing education. Need to be able to offer, and have continued participation in, education-both technical and general. Need to keep up to date with current trends and future needs. Knowledge turnover in the professions (and master craftsman skills) is a growing challenge that will require continuous retraining and lifelong learning. Second and third careers are becoming more common, as more people make mid-life changes in occupation. The half-life of an engineer's knowledge today is only five years. E-Learning will further evolve its Infrastructure, Workforce Relationships, Knowledge Base, and Learning Architecture. Schools will have to teach students how to obtain information, instead of teaching information. Practical knowledge is outdated in 5 to 10 years. Lifelong learning is a necessity. (Education, Technology, & Workforce)

2. Energy Alternatives

Energy usage will increase, including oil, nuclear, and natural gas. Higher prices will require alternative fuels, including ethanol and hydrogen fuel cells. Alternative energy demands will increase. Despite all the calls to develop alternative sources of energy, oil consumption is still rising rapidly. Organizations and individuals will need to be proactive in reducing energy intensity/usage. Clean Nuclear Power Plants, Natural Gas, Fuel Cells, Wind Power, LED, and advanced battery technology will lead the way in replacing large carbon dioxide producing fossil fuels such as coal and oil, and new fuels such as ethanol. A worldwide campaign to improve energy infrastructure is necessary to reduce conventional cooking and heating fires. It is now also possible to create enzymes that work thousands of times faster than their natural counterparts. Turning biomass, e.g., corn stover, grass, etc. into fermentable sugars and then into ethanol. Plastics may be grown on farms, in genetically engineered plants, that are also biodegradable. (Energy, Agriculture, Small Business, Economic, Technology, & Environment)

3. Global Economy and Internet

Globalization and the Internet are allowing small businesses to thrive competitively, worldwide. This trend will accelerate. The Internet makes it possible for small business throughout the world to compete for market share on an even footing with industry leaders. The Internet is growing logarithmically and globally. Global economy is becoming more integrated. We need to remain/become competitive-which might be more difficult for us than underdeveloped nations who have no infrastructure or monetary investment in current systems so they can jump ahead into better technology, etc. Services are the fastest growing sector. How can we have services here that compliment global society? Do we have all of the services locally available that draw active, informed people? Service industries are expected to account for virtually the entire net gain in US employment; computer-related service jobs pay much more than the minimum, for workers with sound education and training. Time is becoming the world's most precious commodity. Can we market or tap into this? Currently we have more of it than other areas of the world. Maybe add this to technology, working from where we live, and

transportation access? Continued growth of the micro-entrepreneur, supported by increasing rapid communication systems. What are some things we do to make Northeast Nebraska a hub? Online commerce in the US by the year 2009, only three years from now, will approach \$340B, according to estimates by Forrester Research Group in Cambridge, MA. The 2004 holiday season saw \$19B spent online; the best figures for the 2005 holiday season suggest it was nearly \$30B (50% increase). (Economic, Small Business, Technology, Education, and Societal Trends)

4. Impact of Gen Xer's and Millennials

The younger generations, under age 30, are entrepreneurs and will start their own businesses at an unprecedented rate. Generation X'ers and the Millennials are the most entrepreneurial generations in history. Generation X and dot-com will have major effects in the future. Entrepreneurship will be stronger in the upcoming generations than ever before. New workers don't trust large firms to provide secure employment during a time of rapid technology change. Millennials throughout the world tend to share values and opinions. Young people place higher value on economic success, while moving away from the "work ethic" traditionally held. We will need high paying jobs somehow combined with a changing attitude towards professional loyalty and lifestyle balance. Societal values are changing rapidly. The work ethic and overall ethics are vanishing. Organizations must increasingly recognize, nurture, reward, and train Millennials and Gen-X'ers. Baby boomers are taking cues from Millennials and Gen-X'ers due to their grasp of the rapid changes. Consumerism and consumption. Millennials are incredibly prone to compulsive spending, especially in large numbers of online purchases. E-business will increase faster as these improve their stature in society. Money management classes will be important. (Workforce, Small Business, Economic, & Societal Trends)

5. Virtual Workforce/Work Place/Life Style Changes

Telecommuting, working from one's own home, has increased sharply, and will continue to rise. Telecommuting is a growing knowledge-age phenomenon. About 80% of companies worldwide now are estimated to have employees who work at home; up from 54% in 2003. The number of telecommuters in the US grew 63.2% between 1999 and 2003. Telecommuters are increasing exponentially - due to wireless networks and PDA's. Mobile business commerce will emerge. Multi-media Communications will also improve significantly due to technology. Real-time voice translation will allow people with different languages to communicate effectively. (Small Business, Economic, Technology, Communication & Lifestyles)

6. Global Security

Terrorism will increase significantly, due to under-employed religious factions. Better technology will spawn a huge increase in security systems and security measures. International exposure includes a greater risk of terror attack. Security systems for business and personal use will be simplified and expanded. People and businesses will increasingly encrypt data. Warfare will increase between new "Superpowers" as they scramble for resources that dry up, unless new energy and recycling technologies are implemented. (Terrorism, Technology, Economic, Institutional, and Societal Trends)

7. Transportation and Accessibility

Advances in transportation technology. We need to keep up with this. People do not want to live in a place where they can not access the rest of the world easily. Tourism and international travel will also increase significantly, with tourists getting their travel information directly over the Internet. (Transportation, & Tourism)

8. Health and Medical Trends

Important Medical advances occur almost daily. Again, need to remain current with this information. How can we meet the needs of aging population, demands of younger generations etc with outdated medical technology? Physical-culture and personal-health movements will remain strong. A shortage of health workers in next two to three decades. The US in particular will need at least twice as many physicians specializing in geriatrics as its current 9,000, as well as half a million more nurses by 2020. (Demographics, Medical, Economic, Education)

9. Communication and Innovation Network

Growth of the information industries requiring general population to be knowledgeable and interdependent. Our community needs up to date information and understanding of global news and updates to remain competitive. Businesses and entire industries are emerging that are based on the production and exchange of information. Knowledge workers are very common. (Economic, & Societal Trends)

10. Population Trends

The world's population will double and the elderly population will grow dramatically. Around the world, poorer countries will continue to grow, keeping economic balance and immigration at the forefront of politics, budgets and planning. Also the elderly population will require more assistance and care in our own country and elsewhere. What creative ideas can be put into use to take advantage of the aging population skills? Workers are retiring later as life expectancy and developed societies are taking their cues from Gen X'ers and dot-coms? How do we offer good jobs to young adults when the older adults are still working? How to keep up to date, and looking forward with older leadership? The aging worldwide population will require more "telecommunications" care, including robotic surgery, and will require more doctors and nurses. (Demographics, Medical, & Societal Trends)

11. Cultural Diversity

Global acceptance and interest in cultural diversity, prompting an integrated global society. This needs to be reflected in our local community to draw metropolitan minded people. The US and other developed countries will have to encourage more immigration to supplement the workforce. (Demographics and Societal Trends)

12. Environment

Increasing sensitivity to environmental issues. Many in US, and our community, don't believe in global warming, don't see direct connection from their actions to environmental problems. Recycling not generally supported. These are all things that globally-minded, young leaders expect. (Environment)

13. Symbiotic Relationships/Partnerships

In the future, both self-reliance and cooperation will be valued. Self-reliance because individuals will no longer be able to fall back on government social-security income, pensions, and other benefits, and cooperation because group action often is the best way to optimize the use of scarce resources, such as retirement savings. The growth of the information industries is creating a knowledge-dependent global society. Information-based organizations are quickly displacing the old command-and-control model of management. Symbiotic relationships and partnerships will be required in order to stay competitive. Businesses must get more creative to attract and retain the best employees: recruiting, benefits, perks, and profit-sharing. Service, Commercial, Industrial, and Idea Technology/Innovation Networks will keep interconnected institutions intact and efficient. (Values, Small Business, Economic, Societal, & Management Trends)

14. Agriculture

Agricultural producers within 75-100 miles of metropolitan areas have the opportunity to become international leaders in the techniques and benefits of producing higher value crops like fresh organic foods. Rapid global population growth will require agriculture to supply as much food over the next 40 years, as has been produced in all of human history. Agricultural commodities will face higher levels of competition, and therefore low prices. Biopharming is a great opportunity to revitalize the agriculture and industry in our region. Because of our agricultural resources and infrastructure, it is here in the Midwest that biopharming will take root. Biotechnology could revolutionize the use of agricultural lands, shifting it away from growing food and towards growing raw materials for industry. (Agriculture, Economic, Small Business, Technology)

15. New Technology

The pace of technological change is accelerating logarithmically and organizations must adopt new methods to deal with increasing and diverse information on all levels. Artificial Intelligence (AI) and Virtual Reality (VR) will reduce workloads and time requirements for all organizations, in assimilated data and solving problems. Travel and meetings will be replaced by E-tourism via VR. Increasingly, workers will be replaced by AI devices. The pace of technological change is accelerating leading to ever shorter product life cycles. Radio Frequency Identification (RFID) and other forms of tagging will improve all aspects of transportation and storage: vehicles, carriers, products, people, etc. Embedded Technology will make more "smart" machines: bathroom mirrors with built-in web browsers, coffee tables with internet connections and video/phone capabilities, clothes with electronic chips, piercing craze will evolve into embedded down-sized electronic chips. (Technology, & Transportation)

16. Water and Food

Water and Food shortages. Utilization of Water and Food Resources must improve in order to handle the strains put on the environment by a near doubling of humans, and increasing dumping of carbon dioxide into the atmosphere and oceans. Vertical farming will improve yields. Half of all drugs are derived from natural sources. Periodic famine and desertification will be more common. Food preservation technology is important. Water shortages and water quality will be continuing problems for the world. That will cause obvious problems for our current agriculture system. (Environmental, & Agriculture)