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IS INFORMATION TECHNOLOGY TRANSFORMING THE U.S. HEARTLAND?

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ABSTRACT

None provided.

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IS INFORMATION TECHNOLOGY TRANSFORMING THE U.S. HEARTLAND?

Many of the eastern states in the U.S. Heartland led the U.S. industrial revolution; the prairie states were leaders in the global agrarian revolution. The region is a mix of what Joel Gareau (1981) calls the Foundry and the Breadbasket. Beginning in the mid-1990s, the Internet and the World Wide Web provided the information technology infrastructure that would transform business, government, and the lives of the residents of the region.

The U.S. Heartland has an abundant supply of water from rivers and the Great Lakes, fertile soil, mineral resources (especially iron and coal), a good transportation system, and a well-educated population. More than 17% of the population of the region have at least bachelor's degrees and the states have many excellent universities. The problem has been the changing employment needs in agriculture and manufacturing, but the Information Revolution or Internet Age has provided new job opportunities and changed the migration patterns and demographic trends of the region. Today we have outstanding access to information technologies and internet connectivity. Although the weather is still generally cold in the winter and hot in the summer

throughout the region, modern climate control, immersive video games, web surfing, and video chat have helped conquer the weather.

WHAT IS THE IMPACT OF IT?

Information technology broadly refers to computing hardware, including PDAs, GPS devices, RFID, networks, and application software like Decision Support systems and computer operating systems. The general impacts from information technology that are occurring globally, like e-business, e-commerce, and e-government, are also positively impacting the Midwest United States. The rate of change is, of course, varied across the region.

Specific impacts are more interesting and suggest the scope and magnitude of the transformation that is occurring. Let me suggest 25 impacts of information technology:

1. Changing business models of book stores, publishing, newspapers, and media companies
2. Changing decision-making processes, especially decentralizing decision-making
3. Changing population migration patterns, especially reducing farm to city migration
4. Creating good jobs, manufacturing high technology products, using information technology, and providing IT services
5. Creating new crimes like phishing and cybertheft, but helping catch criminals
6. Enhancing and expanding distance learning, especially in Higher Education but potentially in K-12
7. Facilitating the creation of virtual communities
8. Facilitating Interfirm coordination and control
9. Impacting citizenship and participation in elections; residents are using e-mail and the Web to further their political activity
10. Improving government revenue collection and law enforcement
11. Improving information distribution; more information is available, with wider dissemination and faster access
12. Improving patient outcomes in Hospitals and clinics
13. Improving the quality of life of residents, especially in rural communities
14. Increasing the efficiency of global product supply chains
15. Increasing entertainment options, especially virtual worlds, online gambling, music, and video
16. Increasing the productivity of organizations
17. Increasing training needs, especially in the use of information technology
18. Providing access to a broader range of goods and services
19. Providing new tools for scholarly research
20. Reducing layers of management and hence managerial overhead costs
21. Reducing privacy and increasing our access to information about other people
22. Reducing the need for cash and hence improving transaction processing
23. Reducing transportation costs
24. Stimulating entrepreneurship, especially increasing the number of technology- and home-based businesses
25. Supporting geographically distributed teams

In the Midwest United States, firms like General Motors encourage car dealers to buy online; Ameritrade in Omaha, Nebraska has helped create a more efficient market for trading stocks; farmers are using global positioning systems and spatial DSS to gather, store, view, and analyze data for making better crop production decisions; Speedpass (www.speedpass.com) is making it easier and faster to pay for purchases at participating Exxon and Mobil stations; and midwestern university professors are studying the impact of information technology and applying IT to real business, government, and organizational problems.

The so-called digital divide seems to be narrowing in the Midwest United States, but more needs to be done to realize the full benefits of information technology. We all need to become more aware of possible changes from information technology.

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