


# Enhancing & Implementing Emerging ICT in Sophisticated Business Informatics Practice for Successful Organizations and Institutions

P. K. Paul <sup>1</sup>, Sushil Sharma<sup>2</sup>, Edward R. K.<sup>3</sup>, P.S. Aithal<sup>4</sup>, S. Ghosh<sup>5</sup>

<sup>1</sup>Executive Director (MCIS), Department of CIS, Information Scientist (Offg.), Raiganj University, India

<sup>2</sup>Associate Provost, Texas A&M University Texarkana, USA

<sup>3</sup>Director General, European International University, Paris, France

<sup>4</sup>Vice Chancellor, Srinivas University, Karnataka, India

<sup>5</sup>Director & Chairman, Kotibarsha Institute of Technology and Management (KITM), WB, India

Corresponding Author: P.K. Paul, [pkpaul.infotech@gmail.com](mailto:pkpaul.infotech@gmail.com)

## Abstract

Information is power and is considered worthy in developing and progressing several things. Computer and Information System give a healthy, sophisticated, and impactful information infrastructure—all together. Previously, Information Science was known as a manual subject (non-technical) for handling information activities and became known as Informatics in many countries. The development of the IT and Computing field is emerging and its applications in Information Science and further related to other subjects and areas lead some of the subject and nomenclature viz. Health Informatics, Bio-Informatics, Geo-Informatics, Chemical Informatics, Business Informatics, etc. These may be called domain-based Informatics and here, Business Informatics is simply a combination of Business Studies (or allied Management) with Information Science and Technology or Informatics. Business Informatics is the application of IT and Computing in industries, organizations, and other emerging corporate worlds. Industries and modern organizations are looking towards advanced and modern intelligent information solutions with proper and sophisticated systems; therefore, organizations can get timely benefits of ICT solutions in industries and

**This is a limited preview of the chapter.**

To read the full-text chapter, get access by purchasing this chapter or consider buying the complete book. If your library has subscription to EBSCOhost, this chapter including other chapters of the book can be accessed through your library.

This chapter is a part of the book, '*Advances in Business Informatics empowered by AI & Intelligent Systems*'

ISBN: 978-81-957322-0-3 (ebk); ISBN: 978-81-957322-1-0 (pbk);  
ISBN: 978-81-957322-2-7 (hbk)

Book DOI: <https://dx.doi.org/10.46679/9788195732203>

The book is available via CSMFL Bookstore, Amazon, Google Play Books, EBSCOhost & EBSCO eBooks

## **Conclusion**

Information Technology and its development is the most significant development in the recent past. Another close field of study, Information Science is also having different subfields and technologies such as Artificial Intelligence, Cloud Computing, Big data, Internet of Things, Business Analytics, Information Assurance, and Cyber Security, Robotics and also offers significant roles in Business Informatics practice. Business Informatics helps in proper and sophisticated information and technological services to industries and organizations. Technology is helping towards integrating tangible and intangible matters for healthy organizations, businesses, and enterprises. Newer technologies are important in managing information for decision-making, including developing business houses faster and more efficiently. Information Technology is supported by various subsystems and components therefore; it helps in the collection, selection, organization, processing, management, and dissemination of information. Business Informatics is an interdisciplinary and practice-based subject, growing rapidly internationally and impacting organizations of the 21st century.

## **References**

- Adamuthe, A. C., Salunkhe, V. D., Patil, S. H., & Thampi, G. T. (2015). Cloud Computing-A market Perspective and Research Directions. *International Journal of Information Technology and Computer Science (IJITCS)*, 7(10), 42-53.  
<https://doi.org/10.5815/ijitcs.2015.10.06>
- Al-Mamary, Y. H., Shamsuddin, A., & Abdul Hamid, N. A. (2014). The meaning of management information systems and its role in telecommunication companies in Yemen. *American Journal of Software Engineering*, 2(2), 22-25.
- Arch-int, S., & Batanov, D. N. (2003). Development of industrial information systems on the Web using business components. *Computers in Industry*, 50(2), 231-250.  
[https://doi.org/10.1016/S0166-3615\(02\)00122-7](https://doi.org/10.1016/S0166-3615(02)00122-7)
- Borko, H. (1968). Information science: what is it? *American documentation*, 19(1), 3-5.  
<https://doi.org/10.1002/asi.5090190103>

- Brock, F. J., & Dhillon, G. S. (2001). Managerial information, the basics. *Journal of International Information Management*, 10(2), 5-12.
- Brookes, B. C. (1980). The foundations of information science. Part I. Philosophical aspects. *Journal of information science*, 2(3-4), 125-133.  
<https://doi.org/10.1177/016555158000200302>
- Buckland, M. K. (1991). Information as thing. *Journal of the American Society for information science*, 42(5), 351-360.  
[https://doi.org/10.1002/\(SICI\)1097-4571\(199106\)42:5<351::AID-ASIS>3.0.CO;2-3](https://doi.org/10.1002/(SICI)1097-4571(199106)42:5<351::AID-ASIS>3.0.CO;2-3)
- Buckland, M. (1999). The landscape of information science: The American Society for Information Science at 62. *Journal of the American Society for Information Science*, 50(11), 970-974.  
[https://doi.org/10.1002/\(SICI\)1097-4571\(1999\)50:11<970::AID-ASIS>3.0.CO;2-D](https://doi.org/10.1002/(SICI)1097-4571(1999)50:11<970::AID-ASIS>3.0.CO;2-D)
- Cornelius, I. (2002). Theorizing information for information science. *Annual review of information science and technology*, 36(1), 392-425.  
<https://doi.org/10.1002/aris.1440360110>
- Cram, W. A., Brohman, K., & Gallupe, R. B. (2016). Information systems control: A review and framework for emerging information systems processes. *Journal of the Association for Information Systems*, 17(4), 2-10.  
<https://doi.org/10.17705/1jais.00427>
- Ellis, C. A., & Nutt, G. J. (1980). Office information systems and computer science. *ACM Computing Surveys (CSUR)*, 12(1), 27-60.  
<https://doi.org/10.1145/356802.356805>
- Gillingham, P. (2011). Computer-based information systems and human service organisations: Emerging problems and future possibilities. *Australian Social Work*, 64(3), 299-312. <https://doi.org/10.1080/0312407X.2010.524705>
- Ghose, R. (2001). Use of information technology for community empowerment: Transforming geographic information systems into community information systems. *Transactions in GIS*, 5(2), 141-163. <https://doi.org/10.1111/1467-9671.00073>
- Holdstock, D. A. (1998). Basics of geographic information systems (GIS). *Journal of Computing in Civil Engineering*, 12(1), 1-4.  
[https://doi.org/10.1061/\(ASCE\)0887-3801\(1998\)12:1\(1\)](https://doi.org/10.1061/(ASCE)0887-3801(1998)12:1(1))

- Kelton, K., Fleischmann, K. R., & Wallace, W. A. (2008). Trust in digital information. *Journal of the American Society for Information Science and Technology*, 59(3), 363-374. <https://doi.org/10.1002/asi.20722>
- Lee, A. S., Thomas, M., & Baskerville, R. L. (2015). Going back to basics in design science: from the information technology artifact to the information systems artifact. *Information Systems Journal*, 25(1), 5-21. <https://doi.org/10.1111/isj.12054>
- Maxwell, D., & Watkins, B. (2003). Humanitarian information systems and emergencies in the Greater Horn of Africa: logical components and logical linkages. *Disasters*, 27(1), 72-90. <https://doi.org/10.1111/1467-7717.00220>
- McCune, J. C. (1994). Information systems get back to basics. *Management Review*, 83(1), 54.
- Mingers, J. C. (1995). Information and meaning: foundations for an intersubjective account. *Information Systems Journal*, 5(4), 285-306. <https://doi.org/10.1111/j.1365-2575.1995.tb00100.x>
- Nunamaker Jr, J. F., Chen, M., & Purdin, T. D. (1990). Systems development in information systems research. *Journal of management information systems*, 7(3), 89-106. <https://doi.org/10.1080/07421222.1990.11517898>
- Paul, P. K., & Kumar, P. (2013). Business Informatics: Emerging Domain of Interdisciplinary Information Science with Possibilities in I-Schools. *International Journal of Marketing Theory*, 3(2), 113-120.
- Paul, P.K. and Aithal, P. S. (2018). Business Information Sciences With Special Reference to the Digital Marketing and SEO as a Field of Study. *Proceedings on National Conference on quality in higher education challenges & opportunities*, 37-47.
- Paul, P.K, Bhuimali, A., Aithal, P. S., & Bhowmick, S. (2018b). Business Information Sciences emphasizing Digital Marketing as an emerging field of Business & IT: A Study of Indian Private Universities. *IRA International Journal of Management & Social Sciences*, 10(2), 63-73. <https://doi.org/10.21013/jmss.v10.n2.p1>
- Paul, P. K., & Chatterjee, D. (2019). iSchools Promoting "Information Science and Technology(IST) Domain Towards Community, Business, and Society With Contemporary Worldwide Trend and Emerging Potentialities in India. In *Advanced Methodologies and Technologies in Artificial Intelligence*,

Computer Simulation, and Human-Computer Interaction (pp. 864-878). IGI Global.

<https://doi.org/10.4018/978-1-5225-7368-5.ch064>

Paul, P.K, Bhimali, A., Aithal, P. S., Kalishankar, T., Saavedra M, R., & Mewada PhD, S. (2021). Emerging IT and Computing Gradients in Information Sciences. *International Journal of Applied Science and Engineering*, 9(01), 01-13.

<https://doi.org/10.30954/2322-0465.1.2021.1>

Robey, D. (1981). Computer information systems and organization structure. *Communications of the ACM*, 24(10), 679-687.

<https://doi.org/10.1145/358769.358786>

Stivers, B. P., & Beard, L. H. (1987). Information systems: getting back to basics. *Journal of Systems Management*, 38(3), 35.

White, H. D., & McCain, K. W. (1998). Visualizing a discipline: An author co-citation analysis of information science, 1972-1995. *Journal of the American Society for Information Science*, 49(4), 327-355.

[https://doi.org/10.1002/\(SICI\)1097-4571\(19980401\)49:4<327::AID-ASI4>3.0.CO;2-4](https://doi.org/10.1002/(SICI)1097-4571(19980401)49:4<327::AID-ASI4>3.0.CO;2-4)

---