

E-BUSINESS & E-COMMERCE

Session #4

Managing Digital Business Infrastructure

Learning Objectives

1. Students able to *outline* the range of hardware and software technologies used to build a digital business infrastructure within an organization and with its partners;
2. Students able to *review* the management actions needed to maintain service quality for users of digital platforms.

Introduction

- *Defining an adequate technology infrastructure* is vital to all start-up online businesses and existing companies making the transformation to digital business
- The infrastructure and support of different types of digital platforms directly affect *the quality of service experienced* by users of the system in terms of *speed* and *reponsiveness*
- *The range of digital services provided* also determines the capability of an organization to compete through differentiating itself in the marketplace

Definition of digital business infrastructure

- Digital business infrastructure refers to the combination of **hardware** such as *servers* and *client desktop computers* and *mobile devices*, **the network used** to link this hardware, and **the software applications used** to deliver services to workers within the business and also to its partners and customers
- Infrastructure also includes **the architecture** of *the networks*, *hardware* and *software* and **where it is located**
- Infrastructure can also be considered to include the methods for publishing data and documents accessed through application

Key management issues of digital business infrastructure

1. Which *digital access platforms* should we support?
2. Setup and selection of *services* for a new digital service
3. How do we achieve *quality of service* in digital services?
4. Where do we *host application*?
5. Application *integration*
6. How do we publish and manage *content* and *data quality*?
7. How do we manage *employee access* to the Internet?
8. How do we *secure data*?

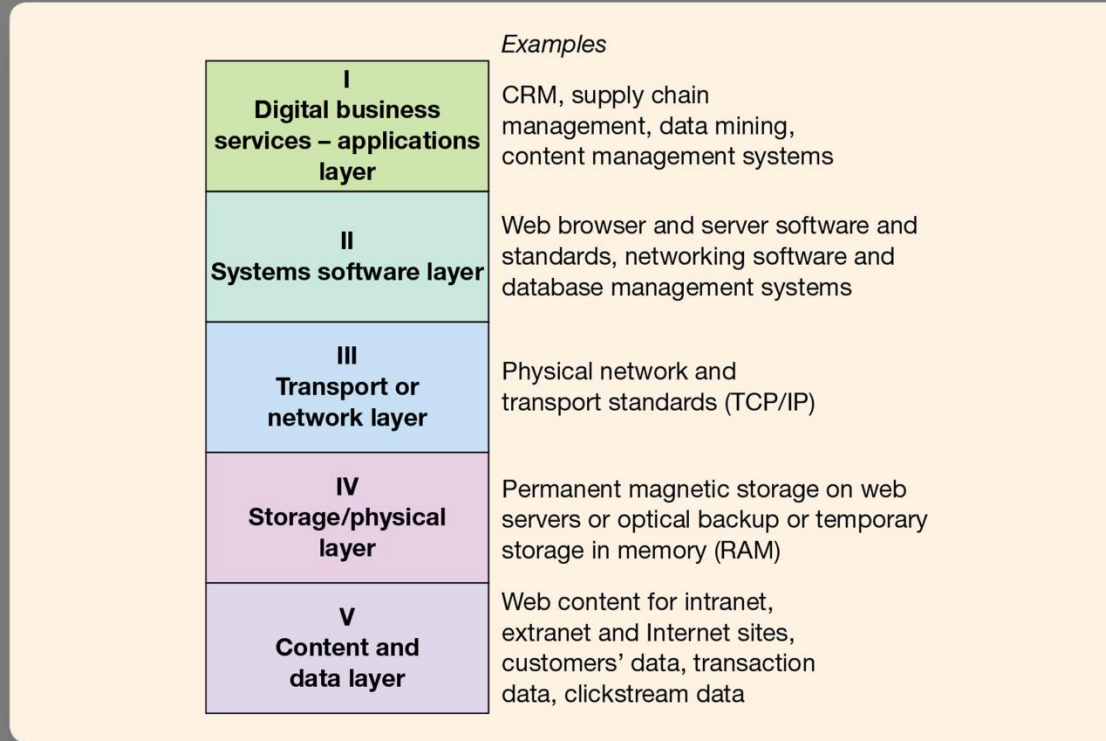
Five common challenges of creating mobile web presence

1. One site or two?
2. Right content
3. UX
4. Personalization
5. Promotion

Mobile/wireless Internet access consumer proposition

- No fixed location
- Location-based services
- Instant access/convenience
- Privacy
- Personalization
- Security

Digital business infrastructure components



A five-layer model of digital business infrastructure

Managing issues in creating a new customer-facing digital service

- Domain name selection and registration
- Selection of hosting services, including cloud providers
- Selection of additional SaaS (Software as a Service) platforms

Domain Name System (DNS)

- With so many computers connected to the Internet, it is important that each computer be uniquely identified –which is why each Internet-connected computer is assigned a unique *Internet Protocol address* (IP address). An IP address consists of four groups of numbers separated by decimal points
- Domain Name System (DNS) gives each computer on the Internet an address comprised of easily recognizable letters and words that could be used instead of a numeric IP address (e.g. www.suhartonochoandra.com or www.paramountconsulting.co.id)
- Last portion of DNS addresses is known as the *top-level domain*. Common top-level domains include [.com](#) for commercial, [.org](#) for organization, [.net](#) for network. For computer located outside of the United States, an additional country domain appears after the top-level domain with two letters, e.g. [.uk](#) for United Kingdom, [.id](#) for Indonesia, [.au](#) for Australia

Main source

1. Chaffey, D. (2015) E-Business and E-Commerce Management: Strategy, Implementation and Practice, 6th Edition. Pearson Education Limited, Harlow, UK.

Other source

1. Rayport, J. And Joworski, B.J. (2003) Introduction to E-Commerce, 2nd edition. McGraw-Hill/Irin, New York, USA.

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