

Chapter 12 Enterprise and Global Management of Information Technology

1. The strategic and operational importance of information technology in business is no longer questioned. As the 21st century unfolds, many companies throughout the world are intent on transforming themselves into global business powerhouses via major investments in global e-business, e-commerce, and other IT initiatives.

True

False

2. As the 21st century unfolds, many companies throughout the world are intent on transforming themselves into global business powerhouses via major investments in global e-business, e-commerce, and other IT initiatives. Thus, there is a real need for business consumers to understand how to manage the vital organizational functions of IT.

True

False

3. Whether you plan to be an entrepreneur and run your own company, a manager in a corporation, or a business professional, managing information systems and technologies will be one of your major responsibilities.

True

False

4. Information technology is a vital business resource that must be properly managed.

True

False

5. Managing the joint development and implementation of business/IT strategies is led by the chief executive officer and the chief technology officer.

True

False

6. The managerial approach to managing information technology in a networked organization includes managing the joint development and implementation of e-business and IT strategies.

True

False

7. That author of your text states that both the CEO and the chief information officer (CIO) of a company must work jointly to manage the development of complementary E-business and IT strategies in order for the company to meet its customer value and business value vision.

True

False

8. The business/IT planning process focuses on discovering innovative approaches to satisfying a company's customer value and business value goals.

True

False

9. The business/IT planning process has three major components: strategy development, resource management, and technology architecture. Using information technology to create innovative e-business systems that focus on customer and business value is an example of resource management.

True
False

10. The business/IT planning process has three major components: strategy development, resource management, and technology architecture. Developing strategic plans for managing or outsourcing a company's IT resources, including IS personnel, hardware, software, data, and network resources best describes strategy development.

True
False

11. The IT architecture that is created by the strategic business/IT planning process is a conceptual design, or blueprint, that includes the following components: technology platform, data resources, applications architecture, and IT organization.

True
False

12. In the early years of computing, the development of large mainframe computers and telecommunications network and terminals caused decentralization of computer hardware and software, databases, and information specialists at the corporate level of organizations.

True
False

13. The development of minicomputers and microcomputers accelerated a downsizing trend, which promoted a move back toward decentralization by many business firms.

True
False

14. The shift towards distributed client/server networks in the networked organization promoted a shift of databases and information specialists to the departmental level and the creation of information centers to support end user and workgroup computing.

True

False

- 15. In relation to the concept of information technology, downsizing refers to moving to smaller computer platforms, such as from mainframe systems to networks of personal computers and servers.**

True

False

- 16. The current trend towards downsizing and distributed client/server networks is achieved by reducing the ability of top management to delegate more decision making to middle managers.**

True

False

- 17. The current trend towards the development of minicomputers and microcomputers has accelerated a downsizing trend, prompting a move back toward decentralization by many business firms with distributed client/server networks at the corporate, department, workgroup, and team levels coming into being.**

True

False

- 18. Your text discusses the concept of downsizing. In relation to the concept of information technology, downsizing refers to moving to smaller computer platforms, such as from mainframe systems to networks of personal computers and servers.**

True

False

- 19. In operations management, the role of system performance monitors is to police the processing of computer jobs, develop planned schedules of computer operations to optimize computer**

system performance, and produce detailed statistics for effective planning and control of computing capacity.

True

False

20. System performance monitors are members of the computer operations staff whose job is to monitor the performance of operational systems. These individuals report directly to the chief information officer in the organization.

True

False

21. System performance monitors also supply information supply information needed by chargeback systems that allocate costs to users based on the information services rendered.

True

False

22. System performance monitors feature process control capabilities. Such packages only monitor; they do not control computer operations at large data centers.

True

False

23. When a company outsources their IT operations, they are in effect turning over all or part of their operations to outside contractors known as value added retailers.

True

False

24. "Outsourcing" refers to a situation where an organization turns all or part of its IS operations over to outside contractors known as systems integrators or facilities management companies.

True

False

- 25. Application development management involves managing activities such as systems analysis and design, prototyping, applications programming, project management, quality assurance, and system maintenance for all major E-business/IT development projects.**

True

False

- 26. IS operations management is concerned with the use of hardware, software, network, and personnel resources in the corporate or business unit data centers (computer centers) of an organization.**

True

False

- 27. The role of development centers in an organization is to evaluate new applications development tools and help information systems specialists use them to improve their application development efforts.**

True

False

- 28. Information systems operations management within an organization is concerned with the use of hardware, software, network, and personnel resources in the corporate or business unit data centers of an organization, including activities such as data entry, equipment operations, production control, and production support.**

True

False

- 29. Your text defines a data center as an organizational unit that uses centralized computing resources to perform information**

processing activities for an organization. Also known as a computer center.

True

False

30. A chief information officer (CIO) is generally responsible for all information-related systems except telecommunications and office systems within an organization.

True

False

31. A chief information officer's (CIO's) main responsibility is to direct the day-to-day information service activities within the organization.

True

False

32. A chief information officer's (CIO's) main responsibility is to oversee all use of information technology in the organization and also work with top executives to develop long-term and strategic information systems plans.

True

False

33. The position of chief information officer (CIO) is rarely staffed with an executive from business functions or units which are outside of the IS field.

True

False

34. Your text implies that the chief information officer is the operational level IT manager in a firm.

True
False

- 35. Most organizations claim the major reason for the failure of high-quality information systems is the over involvement in the development of the systems by managerial and end-users.**

True
False

- 36. The position of chief technology officer (CTO) is normally responsible for all information technology planning and development within an organization. These responsibilities include the Internet, intranets, and a variety of electronic commerce and collaboration technologies.**

True
False

- 37. With the number of people in organizations using computers to help them do their jobs increasing daily, and the continued trend towards the simplicity of computer technology and software, many organizations no longer are required to provide end user services to support and manage end user and workgroup computing.**

True
False

- 38. Teams and workgroups of business professionals commonly use mainframes, software packages, and the Internet to develop and apply information technology to do their work activities**

True
False

- 39. Information technology is not being used effectively by companies that use IT primarily to computerize traditional business processes, instead of developing innovative e-business processes involving customers, suppliers, and other business partners, electronic commerce, and Web-enabled decision support.**

True

False

40. The experiences of successful organizations reveal that extensive and meaningful managerial involvement is the only key ingredient of high-quality information systems performance.

True

False

41. The senior management's role in determining how much a company should spend on IT is to define the strategic role that IT will play in the company and then determine the level of funding needed to achieve that objective.

True

False

42. Your text refers to global E-business technology management as managing information technologies in a global E-business enterprise, amid the cultural, political, and geoeconomic challenges involved in developing E-business/IT strategies, global E-business and E-commerce applications portfolios, Internet-based technology platforms, and global data resource management.

True

False

43. Your text discusses the dimensions of managing global information technology. The challenge of managing the geoeconomic dimensions refers to geology and economic realities that must be confronted in order for a business to succeed in global markets.

True

False

44. A major political challenge in managing global E-business and IT is that many countries have reciprocal trade agreements that

require a business to spend part of the revenue that they earn in a country in that nation's economy.

True

False

45. Many countries have rules regulating or prohibiting the transfer of data across their national boundaries. According to your text, this challenge would be referred to as a geoeconomic challenge.

True

False

46. Your text outlines a number of global E-business technology management challenges that firms are facing in conducting business on a worldwide basis. Elements such as dealing with the differences in time zones, job skills, and costs of living would be considered as cultural challenges.

True

False

47. Your text discusses the cultural, political, and geoeconomic challenges facing global organizations today. A major geoeconomic challenge in global business and IT is that many countries have rules regulating or prohibiting the transfer of data across their national boundaries.

True

False

48. Your text outlines a number of global E-business technology management challenges that firms are facing in conducting business on a worldwide basis. Global IT managers must be trained and sensitized to cultural differences before they are sent abroad or brought into a corporation's home country.

True

False

49. Cultural diversity is a minimal factor in the transfer or expansion of a transnational firm's IT system across national boundaries.

True

False

50. A global business strategy is one in which firms integrate their global business activities through close cooperation and interdependence among their international subsidiaries and their corporate headquarters.

True

False

51. A firm's IT applications depend on a variety of “global business drivers” or business requirements caused by the nature of the industry and its competitive or environmental forces.

True

False

52. As global operations expand and global competition heats up, there is increasing pressure for companies to install global transaction processing applications for their customers and suppliers.

True

False

53. The choice of technology platform (also called the technology infrastructure) is a major dimension of global IT management and involves deciding what hardware, software, telecommunications networks, and computing facilities will be needed to support global business operations.

True

False

54. Most international organizations have found that the management of their technology platform has become incredibly easy.

Basically, the reason for this is that hardware choices have become standardized throughout the world, and parts for these platforms are readily available.

True

False

55. Companies with global business operations use centralized corporate data centers so that they are not forced to meet local and regional technology platform regulations in their foreign subsidiaries.

True

False

56. The Internet and the World Wide Web have become vital components in international business and commerce. By connecting their businesses to these online global infrastructures, companies can expand their markets, reduce communications and distribution costs, and improve their profit margins without massive cost outlays for new telecommunications facilities.

True

False

57. The concept of transborder data flows can be thought of as the flow of business data across international borders over telecommunications networks of global information systems.

True

False

58. Instead of trying to force data standardization on subsidiaries, the trend in global firms is to establish separate data architectures and corporate database designs for each subsidiary.

True

False

59. A “multinational development team” is a systems development strategy used in global firms where parts of the system are assigned to different subsidiaries and the home office to develop at the same time.

True

False

60. “Centers of excellence” is a systems development strategy in global firms where an entire system is assigned to a particular subsidiary based on their expertise in the business or technical dimensions needed for successful development.

True

False

61. Several strategies can be used to solve some of the systems development problems that arise in global IT. A “parallel development” effort is when parts of the system are assigned to different subsidiaries and the home office to develop at the same time, based on the expertise and experience at each site.

True

False

62. The CIO and IT managers share responsibility for managing the work of IT professionals who are typically organized into a variety of project teams and other organizational subunits. In addition,

a.

They are responsible for managing the hardware infrastructure.

b.

They are responsible for managing the IT infrastructure of hardware and software.

c.

They are responsible for managing the IT infrastructure of hardware, software, databases, telecommunications networks, and other IT resources.

d.

They are responsible for managing the IT infrastructure of hardware, software, and human resources.

63. The managerial approach to managing information technology in an e-business enterprise include which of the following:

a.

Managing the joint development and implementation of e-business and IT strategies

b.

Managing the development of e-business applications and the research and implementation of new information technologies

c.

Managing the IT processes, professionals and sub-units within a company's IT organization and IS function

d.

All of the above

64. The business/IT planning process has three major components: strategy development, resource management, and technology architecture. Using information technology to create innovative e-

business systems that focus on customer and business value is an example of which component?

a.

Strategy development

b.

Resource management

c.

Technology architecture

d.

None of the above.

65. The business/IT planning process has three major components: strategy development, resource management, and technology architecture. Which of the following best describes the activities undertaken by resource management?

a.

Developing strategic plans for managing or outsourcing a company's IT resources, including IS personnel, hardware, software, data, and network resources.

b.

Managing the complementary business and IT strategies to meet its customer value and business value vision.

c.

Focusing on discovering innovative approaches to satisfying a company's customer value and business value goals.

d.

Developing organizational plans for managing or outsourcing a company's IT resources, including IS personnel, hardware, software, data, and network resources.

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66. The decentralization of information services within an organization is currently being supported by:

a.

The development of supercomputers.

b.

The development of microcomputers and distributed processing networks of computers at the corporate, department and workgroup level.

c.

The development of large mainframe computers and centralized computer centers.

d.

The development of telecommunications.

67. The IT architecture that is created by the business/IT planning process is a conceptual design, or blueprint, that includes several components. The technology platform is best described as:

a.

The Internet, intranets, extranets, and other networks, computer systems, system software, and integrated enterprise application software that provide a computing and communications infrastructure, or platform, that supports the strategic use of information technology for e-business, e-commerce, and other business/IT applications.

b.

The business applications of information technology that are designed to support the strategic business initiatives.

c.

The business applications of information technology that are designed to support the customer valuation and business valuation functions of the company.

d.

The many types of databases including data warehouses and Internet/intranet databases.

68. The development of minicomputers and microcomputers accelerated which of the following trends?

a.

Centralization of computer hardware and software

b.

Downsizing

c.

Strategic planning

d.

Decentralization of computer hardware

69. Which one of the following would not be considered as a form that outsourcing can take on?

a.

Purchasing an existing software package.

b.

Purchasing an existing software package and requesting modifications.

c.

Outsourcing the development of a system for which no software package exists.

d.

All of the above apply to the concept of outsourcing.

70. Systems integrators or facilities management companies are:

a.

Independent subsidiaries of an organization that offer information-processing services to external organizations as well as their parent company.

b.

Companies that use information resource management techniques to manage the development of their information systems.

c.

Outside contractors that take over part or all of the information services operations for an organization.

d.

Companies using a hybrid of centralized and decentralized information systems.

71. Managing activities such as systems analysis and design, prototyping, applications programming, project management, quality assurance, and system maintenance is:

a.

Outsourcing

b.

Application development management

c.

Development centers

d.

Application service management

72. The role of development centers is staffed with information systems professional. Their role is to:

a.

Evaluate new application development tools

b.

Help information systems specialist use application development tools to improve application development efforts

c.

A and B apply

d.

Neither A nor B apply

73. Which one of the following is NOT involved in the management of computer system performance?:

a.

Monitoring the processing of computer jobs.

b.

Evaluating system utilization and costs.

c.

Production planning and control.

d.

Managing programming teams.

74. IS systems performance monitors are concerned with:

a.

The use of hardware, software, and personnel resources in the corporate or business unit data centers of an organization.

b.

Monitoring the processing of computer jobs and scheduling in order to optimize computer performance.

c.

Producing detailed statistics to control computer capacity.

d.

B and C apply.

75. When companies use chargeback systems, the information systems department becomes a service center whose costs are recorded, reported, allocated, and charged back to specific end user business units, depending on their use of:

a.

Record keeping

b.

System resources

c.

Lights out

d.

Information systems personnel

76. Which one of the following is NOT a component of the human resource management of IT?:

a.

Salary and wage levels.

b.

Recruiting and maintaining qualified personnel.

c.

Evaluate job performance.

d.

Network management.

77. A chief information officer:

a.

Does not have responsibility for a firm's office information systems.

b.

Has major responsibility for long-term planning and strategy.

c.

Is expected to closely supervise the internal operations of the information services department, but has limited responsibility for interfacing with other departments.

d.

Develops and administers training programs for information services personnel and computer users.

78. Many companies have created a senior management position in their organizations. The chief information officer (CIO):

a.

Is a mid-level management position.

b.

Oversees the use of all information technology in the organization except telecommunications services and office automation systems.

c.

Is primarily responsible for directing day-to-day information services activities.

d.

Is responsible for implementing an information resource management role for information services, and for helping to develop strategic systems within the firm.

79. The chief information officer is a _____ level IT manager.

a.

Tactical

b.

Operational

c.

Strategic

d.

Departmental

80. Levels of management involvement and governance of information technology include:

a.

Executive information technology committees.

b.

Management information committees.

c.

End user management of information technology.

d.

All of the above.

81. Many companies have policies that require managers to be involved in IT decisions that affect their business units. This helps managers:

a.

Improve the strategic customer value of information technology.

b.

Avoid IS performance problems in their business units and development projects.

c.

Monitor the problems of employee resistance and poor user interface design.

d.

Oversee involvement in other vital management tasks.

82. Senior management needs to be involved in critical business/IT decisions to optimize the business value and performance of the IT function. The consequence of abdicating the decision of how much to spend on IT is:

a.

The company may fail to develop an IT platform that furthers its strategy despite high IT expenditures.

b.

Excessive technical and process standardization will limit the flexibility of business units, or frequent exceptions to the standards that increase costs and limit business synergies.

c.

The lack of focus may overwhelm the IT unit.

d.

The company may pay for service options that, given its priorities, aren't worth the costs.

83. Senior management needs to be involved in critical business/IT decisions to optimize the business value and performance of the IT function. The consequence of abdicating the decision of which business processes should receive IT dollars is:

a.

The company may fail to develop an IT platform that furthers its strategy despite high IT expenditures.

b.

Excessive technical and process standardization will limit the flexibility of business units, or frequent exceptions to the standards that increase costs and limit business synergies.

c.

The lack of focus may overwhelm the IT unit.

d.

The company may pay for service options that, given its priorities, aren't worth the costs.

84. Senior management needs to be involved in critical business/IT decisions to optimize the business value and performance of the IT function. The consequence of abdicating the decision of how good IT services really need to be is:

a.

The company may fail to develop an IT platform that furthers its strategy despite high IT expenditures.

b.

Excessive technical and process standardization will limit the flexibility of business units, or frequent exceptions to the standards that increase costs and limit business synergies.

c.

The lack of focus may overwhelm the IT unit.

d.

The company may pay for service options that, given its priorities, aren't worth the costs.

85. Which one of the following is NOT a major dimension of global IT cultural, political, and geoeconomic challenges?:

a.

Global business and IT strategies.

b.

Global business and IT application portfolios.

c.

Global IT platforms.

d.

Global software management.

86. Global IT management must focus on:

a.

Managing and developing global IT business strategies.

b.

Managing global application portfolios and global technologies and platforms.

c.

Managing global databases and systems development projects.

d.

All of the above.

87. Which one of the following is NOT a geoeconomic challenge in global IT?:

a.

Transborder data flows.

b.

24-hour time zones.

c.

Physical distances.

d.

Job skills.

88. The trend in global business and IT strategies is towards a:

a.

Transnational strategy.

b.

Multinational strategy.

c.

International strategy.

d.

Global strategy.

89. A transnational strategy is one in which a firm integrates its global business activities through close cooperation and interdependence among international subsidiaries and corporate headquarters. An international strategy involves:

a.

A strategy where foreign subsidiaries operate autonomously.

b.

A strategy in which foreign subsidiaries are autonomous but are dependent on headquarters for new processes, products, and ideas.

c.

A strategy where a company's worldwide operations are closely managed by corporate headquarters.

d.

None of the above.

90. Companies operating internationally are moving toward transnational business and IT strategies. One of the chief differences between international and global business and IT strategies is:

a.

A global IT strategy is multiregional whereas an international IT strategy is region specific.

b.

A global IT strategy is region specific whereas an international IT strategy is multiregional.

c.

A global IT strategy is region specific whereas an international IT strategy is virtual.

d.

A global IT strategy focuses on world markets whereas an international IT strategy is multiregional.

91. Which of the following would NOT be associated with a transnational e-business strategy?

a.

Global sourcing.

b.

Horizontal integration.

c.

Transparent manufacturing.

d.

Cross regionalization.

92. Which one of the following is a business driver for global IT?:

a.

Unique assembly line hardware.

b.

Isolated work unit software.

c.

Global collaboration.

d.

Regional employees.

93. Which one of the following statements best describes global IT platforms?:

a.

Hardware choices are difficult in some countries because of high tariffs and import restrictions.

b.

Software packages are compatible in all countries when you buy from the same hardware vendor.

c.

Hardware choices are easier in global markets than in the US because of short lead times for government approvals.

d.

Increasing hardware costs is one of the chief reasons for the trend toward the use of global IT.

94. Which one of the following statements about global IT platforms is false?:

a.

Hardware choices are difficult in some countries because of high tariffs and import restrictions.

b.

Software packages are not compatible in many countries even when buying from the same hardware vendor.

c.

Hardware choices are difficult in global markets because of long lead times for government approvals.

d.

Increasing hardware costs are one of the chief reasons for the trend toward the use of global IT.

95. Which one of the following statements about global IT platforms is false?:

a.

Hardware choices are difficult in some countries because of high tariffs and import restrictions.

b.

Software packages are not compatible in many countries even when buying from the same hardware vendor.

c.

Hardware choices are difficult in global markets because of long lead times for government approvals.

d.

Increasing hardware costs are one of the chief reasons for the trend toward the use of global IT.

96. Many countries view the process of transborder data flows (TDF), where business data flows across international borders over the telecommunications networks of global information systems, as:

a.

Violating their national sovereignty.

b.

Violating their privacy legislation.

c.

Violating their laws to protect the local IT industry from competition.

d.

All of the above.

97. Transborder data flow is a process where business data crosses international borders over the telecommunications networks of global information systems. Many countries view TDF as:

a.

Violating their national sovereignty.

b.

Violating their privacy legislation.

c.

Violating their laws to protect the local IT industry from competition.

d.

All of the above apply.

98. Transborder data flows are

a.

A challenge for transnational firms.

b.

Subject to custom regulations.

c.

The result of the existence of real political borders.

d.

All of the above.

99. Organizations use different strategies to solve systems development problems that arise in global information technology. In the multinational approach:

a.

Key people from several subsidiaries are used to ensure that the system design meets the needs of local sites as well as corporate headquarters.

b.

Key people transform an application used by the home office into a global application.

c.

Parts of the system are assigned to different subsidiaries and the home office to develop at the same time, based on the expertise and experience at each site.

d.

An entire system may be assigned for development to a particular subsidiary based on their expertise in the business or technical dimensions needed for successful development.

100. Organizations use different strategies to solve systems development problems that arise in global information technology. In the parallel development approach:

a.

Key people from several subsidiaries are used to ensure that the system design meets the needs of local sites as well as corporate headquarters.

b.

Key people transform an application used by the home office into a global application.

c.

Parts of the system are assigned to different subsidiaries and the home office to develop at the same time, based on the expertise and experience at each site.

d.

An entire system may be assigned for development to a particular subsidiary based on their expertise in the business or technical dimensions needed for successful development.

101. The early years of computing took place within a centralized structure. The development of minicomputers and microcomputers greatly accelerated a _____ trend, where many organizations are now thought of as having decentralized structures.

Downsizing

102. When a corporation turns over all or part of there is operations to outside contractors, this action is commonly referred to as _____.

Outsourcing

103. In relation to the concept of information technology, _____ refers to moving to smaller computer platforms, such as from mainframe systems to networks of personal computers and servers.

Downsizing

104. “_____” refers to a situation where an organization turns all or part of its IS operations over to outside contractors known as systems integrators or facilities management companies.

Outsourcing

105. Information systems _____ management within an organization is concerned with the use of hardware, software, network, and personnel resources in the corporate or business unit data centers of an organization, including activities such as data entry, equipment operations, production control, and production support.

Operations

106. Your text defines a _____ as an organizational unit that uses centralized computing resources to perform information processing activities for an organization. Also known as a computer center.

Data Center

107. System performance monitors supply information needed by chargeback systems. _____ systems are defined as methods of allocating costs to end user departments based on the information services rendered and information system resources utilized.

Chargeback

108. That author of your text states that both the chief executive officer (CEO) and the chief _____ officer (CIO) of a company must work jointly to manage the development of complementary E-business and IT strategies in order for the company to meet its customer value and business value vision.

Information

109. A _____ main responsibility is to oversee all use of information technology in the organization and also work with top executives to develop long-term and strategic information systems plans.

Chief Information Officer's

110. The _____ is a senior manager that oversees all information technology for a firm, concentrating on long-range information system planning and strategy.

Chief Information Officer (CIO)

111. The position of _____ officer (CTO) is normally responsible for all information technology planning and development within an organization.

Chief Technology

112. Your text refers to _____ information technology as the use of computer-based information systems and telecommunications networks using a variety of information technologies to support global business operations and management.

Global

113. A major _____ challenge in managing global E-business and IT is that many countries have reciprocal trade agreements that require a business to spend part of the revenue that they earn in a country in that nation's economy.

Political

114. Many countries have rules regulating or prohibiting the transfer of data across their national boundaries. According to your text, this challenge would be referred to as a _____ challenge.

Political

115. A _____ challenge in managing global E-businesses and IT involves the effects of geography on the economic realities of international business activities.

Geoeconomic

116. Your text outlines a number of global E-business technology management challenges that firms are facing in conducting business on a worldwide basis. Elements such as dealing with the differences in time zones, job skills, and costs of living would be considered as _____ challenges.

Geoeconomic

117. _____ challenges in global business and IT refer to the effects of geography on the economic realities of international business activities.

Geoeconomic

118. Your text outlines a number of global E-business technology management challenges that firms are facing in conducting business on a worldwide basis. Elements such as dealing with differences in language, religions, customers, social attitudes, and political philosophies are considered as _____ challenges.

Cultural

119. Your text discusses a number of global challenges that they face in conducting international business. _____ is the collective personality of a nation or society.

Culture

120. Your text defines a _____ strategy as a management approach in which an organization integrates its global business activities through close cooperation and interdependence among its headquarters, operations, and international subsidiaries, and its use of appropriate global information technologies.

Transnational

121. A _____ firm produces and sells products and services in countries all over the world.

Transnational

122. Information crossing borders that is subject to custom regulations is called _____.

Transborder Data Flows

123. One strategy to solve systems development problems that arise in global IT is to set up _____ development, which assigns parts of the system to different subsidiaries and the home office to develop at the same time based on the expertise and experience at each site.

Parallel