65.1 Introduction

Business–information technology (IT) alignment refers to applying IT in an appropriate and timely way, in harmony with business strategies, goals, and needs. It has been a fundamental concern of business and IT executives since the 1970s. This definition of alignment addresses:

- How IT is aligned with the business
- How the business should or could be aligned with IT

Mature alignment evolves into a relationship in which IT and other business functions adapt their strategies together. When discussing business–IT alignment, terms such as harmony, linkage, fusion, converged, and integration are frequently used synonymously with the term alignment. It does not matter whether one considers alignment from either a business-driven perspective (IT enabled) or from an IT-driven perspective; the objective is to ensure that the organizational strategies adapt harmoniously. The evidence that IT has the power to transform whole industries and markets is strong.\(^1\)\(^-\)\(^10\) In addition to research that will be discussed in this chapter, good examples that have been discussed previously include Amazon.com, Dell, Cisco, and Federal Express. Important questions that need to be addressed include the following:

- How can organizations assess alignment?
- How can organizations improve alignment?
- How can organizations achieve mature alignment?

The purpose of this chapter is to present an approach for assessing the maturity of a firm’s business–IT alignment. Until recently, nothing has been available. The alignment maturity assessment described in
this chapter provides a comprehensive descriptive and prescriptive vehicle for organizations to evaluate business–IT alignment in terms of where they are and what they can do to improve the alignment. The maturity assessment applies the previous research that identified enablers/inhibitors to achieving alignment\textsuperscript{10,11} and the empirical evidence gathered by management consultants who applied the methodology that leverages the most important enablers and inhibitors as building blocks for the evaluation. The foundation for the maturity assessment is also based on the popular work done by the Software Engineering Institute, Keen’s “reach and range,” and an evolution of the Nolan and Gibson stages of growth.\textsuperscript{12–14}

### 65.2 Why Alignment Is Important

Alignment’s importance has been well known and well documented since the late 1970s.\textsuperscript{10,15–23} Over the years, it has persisted among the top-ranked concerns of business executives. IT and business alignment was the second highest ranked issue in the recent trends survey of IT leaders from 362 global organizations.\textsuperscript{24} Alignment seems more important as companies strive to integrate technology and business in light of dynamic business strategies and the continuously evolving technologies.\textsuperscript{2,25} In addition to the importance of alignment, what has not been clear is how to achieve and sustain this harmony between business and IT, how to assess the maturity of alignment, and what the impact of misalignment might be on the firm.\textsuperscript{26} To achieve and sustain this synergistic relationship is anything but easy.

There are several reasons why attaining IT–business alignment has been so elusive.

The first reason is that the definition of alignment is frequently focused only on how IT is aligned (e.g., converged, in harmony, integrated, linked, synchronized) with the business. Alignment must also address how the business is aligned with IT. Alignment must focus on how IT and the business are aligned with each other; IT can both enable and drive business change.

The second reason is that organizations (practitioners, consultants, academics) have often looked for a silver bullet. Originally, some thought the right technology (e.g., infrastructure, applications) was the answer. While important, it is not enough. Likewise, improved communications between IT and the business help, but it is not enough. Similarly, establishing a partnership is not enough nor is balanced metrics that combine appropriate business and technical measurements. Clearly, mature alignment cannot be attained without effective and efficient execution and demonstration of value, but this alone is also insufficient. More recently, governance has been touted as the answer—to identify and prioritize projects, resources, and risks. Today, we also recognize the importance of having the appropriate skills to execute and support the environment. Our research has found that all six of these components must be addressed to improve alignment.

The third reason that IT–business alignment has been elusive is that there has not been an effective tool to gauge the maturity of IT–business alignment—a tool that can provide both a descriptive assessment and a prescriptive roadmap on how to improve. As you will see, the insights from the alignment maturity benchmarking provide extensive insights to this longstanding conundrum.

The fourth reason that IT–business alignment has been so difficult to achieve is that there is a tendency in many organizations (even ones where the importance of alignment is recognized) to focus their attention on IT infrastructure considerations. This unbalanced approach can often lead to missed opportunities to identify elements of the business infrastructure that are in need of improvements.

Finally, the fifth reason that the advancement of IT–business alignment has been stalled involves semantic differences in how to refer to it. Disagreements regarding alignment terminology (“linked” vs. “converged”; “integrated” vs. “harmonized”) have ironically become a barrier to alignment itself.

Luftman’s research suggests that while there is no silver bullet for achieving alignment, progress has been made. In fact, the research demonstrates that “a line” has been drawn. When organizations
cross it, they have identified and addressed ways to enhance IT–business alignment. The alignment maturity model is thus both descriptive and prescriptive. CIO’s can use it to identify their organization’s alignment maturity and identify means to enhance it. Yet, that “line” is dynamic and continually evolving. So alignment can always be improved.

From measuring the six components in organizations in the United States, Latin America, Europe, and India, we found that most organizations today are in Level 3 of a five-level maturity assessment model. Hence, the pronouncement of the “death of alignment” is premature; there is still a long way to go in the journey for aligning IT and business.

Identifying an organization’s alignment maturity provides an excellent vehicle for understanding and improving the business–IT alignment. As elaborated on in this chapter, alignment maturity focuses on six important areas. ALL must be simultaneously addressed to improve the harmony among IT and business. Too frequently, consultants and practitioners, looking for the silver bullet, focused their attention on only one or a subset of these important considerations. As companies strive to link technology and business, they must address both

- Doing the right things (effectiveness)
- Doing things right (efficiency)

In recent years, a great deal of research and analysis focused on the linkages among business and IT, the role of partnerships among IT and business management, and the need to understand the transformation of business strategies resulting from the competitive use of IT. Firms need to change not only their business scope, but also their infrastructure as a result of IT innovation. Much of this research, however, was conceptual. Empirical studies of alignment only examined a single industry and/or firm. Conclusions from such empirical studies are potentially biased and may not be applicable to other industries. These studies lacked the consistent results across industries, across functional positions, and across time. This provided the impetus for defining a vehicle for assessing business, along with providing a roadmap for how best to improve it: IT alignment maturity.

As discussed earlier, alignment maturity evolves into a relationship in which the function of IT and other business functions adapt their strategies together. Achieving alignment is evolutionary and dynamic. IT requires strong support from senior management, good working relationships, strong leadership, appropriate prioritization, trust, and effective communication, as well as a thorough understanding of the business and technical environments. Achieving and sustaining alignment demands focusing on maximizing the enablers and minimizing the inhibitors that cultivate the integration of IT and business.

Alignment of IT strategy and the organization’s business strategy is a fundamental principle advocated for several decades. IT investment has been increasing since its inception, as managers look for ways to manage IT successfully and to integrate it into the organization’s strategies. As a result, IT managers need to

- Be knowledgeable about how the new IT technologies can be integrated into the business and with existing/emerging technologies
- Be privy to senior management’s tactical and strategic plans
- Be present when corporate strategies are discussed
- Understand the strengths and weaknesses of the technologies in question and the corporate-wide implications

Several proposed frameworks assess the strategic issues of IT as a competitive weapon. They have not, however, yielded empirical evidence, nor have they provided a roadmap to assess and enhance alignment. Numerous studies focus on business process redesign and reengineering as a way to achieve competitive advantage with IT. This advantage comes from the appropriate application of IT as a driver and enabler of business strategies.
65.3 Strategic Alignment Maturity

The concept of alignment maturity as a necessary precondition for an organization’s ability to implement its strategy emerged as a concept in the late 1990s as it became increasingly evident that organizations were, by and large, failing to successfully execute nominally well-defined strategic objectives. Why was this the case? Early research into this issue hypothesized that an organization’s ability to successfully implement strategy was related to the “level” of strategic alignment between IT and the business, which reflects both the dynamic nature of alignment and the fact that alignment is, itself, a process that reflects key organizational practices that enable (or inhibit, in their absence or misapplication) alignment. A model of alignment maturity emerged from this research that reflects these concepts. As Figure 65.1 illustrates, the Strategic Alignment Maturity (SAM) model involves the following five conceptual levels of SAM:

1. Initial/ad hoc process—Business and IT are not aligned or harmonized
2. Committed process—The organization has committed to becoming aligned
3. Established focused process—SAM established and focused on business objectives
4. Improved/managed process—Reinforcing the concept of IT as a “value center”
5. Optimized process—Integrated and coadaptive business and IT strategic planning

Each of the five levels of alignment maturity focuses, in turn, on a set of six components based on practices validated in 2001 with an evaluation of 25 “Fortune 500” companies. As of the writing of this chapter, 362 Global 1000 organizations from around the world (and several hundred smaller companies) and 2100 business and IT executives have participated in formally assessing their IT business alignment maturity. Some of the insights from these assessments are discussed in the section of this chapter that describes the different maturity components. Assessments continue to be performed.

FIGURE 65.1 Alignment maturity summary.
As discussed earlier, organizations have often looked for a silver bullet to improve the alignment of IT–business. Some thought the right technology (e.g., infrastructure, applications) was the answer. While important, it is not enough. Likewise, improved communications between IT and the business help, but are not enough. Similarly, establishing a partnership is not enough, nor is balanced metrics that combine appropriate business and technical measurements. More recently, governance has been touted as the answer—to identify and prioritize projects, resources, and risks. Today, we also recognize the importance of having the appropriate skills to execute and support the environment. Research has found that all six of these components must be addressed to improve alignment.

Additionally, there has not been an effective tool to gauge the maturity of the IT–business alignment—a tool that can provide both a descriptive assessment and a prescriptive roadmap on how to improve. From measuring the six components in organizations in the United States, Latin America, Europe, and India, most organizations today are in a low Level 3 of a five-level maturity assessment model; there are still many opportunities for improvement.

The six IT–business alignment criteria are illustrated in Figure 65.2 and are described at a more detailed level in the following section. All six must be addressed to ensure mature alignment; looking for a single answer will just not do it. These six criteria are

1. **Communications maturity**—Ensuring effective ongoing knowledge sharing across organizations
2. **Competency/value measurement maturity**—Demonstrating the value of IT in terms of contribution to the business
3. **Governance maturity**—Ensuring that the appropriate business and IT participants formally discuss and review the priorities and allocations of IT resources

![Alignment maturity criteria](image)

**FIGURE 65.2** Alignment maturity criteria.
4. **Partnership maturity**—How each organization perceives the contribution of the other, the trust that develops among the participants, and the sharing of risks and rewards

5. **Scope and architecture maturity**—The extent to which IT is able to
   - Go beyond the back office and into the front office of the organization to directly impact customers/clients and strategic partners
   - Assume a role supporting a flexible infrastructure that is transparent to all business partners and customers
   - Evaluate and apply emerging technologies effectively
   - Enable or drive business processes and strategies as a true standard
   - Provide solutions customizable to customer needs

6. **Skills maturity**—Human resource considerations such as training, salary, performance feedback, and career opportunities are assessed to identify how to enhance the organization’s cultural and social environment as a component of organizational effectiveness

Knowing the maturity of its strategic choices and alignment practices makes it possible for a firm to see where it stands with respect to its “alignment gaps” and how it can close these gaps. The pyramid in Figure 65.3 illustrates the alignment gap on each level of alignment maturity vividly. The five levels of alignment maturity are introduced in this section and then will be elaborated in the following section.

**Level 1**: Initial or ad hoc processes. Organizations at Level 1 generally have poor communications between IT and the business and also a poor understanding of the value or contribution the other provides. Their relationships tend to be formal and rigid, and their metrics are usually technical rather than business oriented. Service-level agreements (SLAs) tend to be sporadic. IT planning or business planning is ad hoc. IT is viewed as a cost center and considered “a cost of doing business.” The two parties also have minimal trust and partnership. IT projects rarely have business sponsors or champions. The business and IT also have little to no career crossovers. Applications focus on traditional back-office support, such as e-mail, accounting, and HR, with no integration among them. Finally, Level 1 organizations do not have an aligned IT–business strategy.

![Alignment gaps](image-url)
Level 2: Committed processes. Organizations at Level 2 have begun enhancing their IT–business relationship. Alignment tends to focus on functions or departments (e.g., finance, R&D, manufacturing, marketing) or geographic locations (e.g., United States, Europe, Asia). The business and IT have a limited understanding of each other’s responsibilities and roles. IT metrics and service levels are technical and cost-oriented, and they are not linked to business metrics. Few continuous improvement programs exist. Management interactions between IT and the business tend to be transaction-based rather than partnership-based, and IT spending relates to basic operations. Business sponsorship of IT projects is limited. At the function level, there is some career crossover between the business and IT. IT management considers technical skills the most important for IT.

Level 3: Established, focused processes. In Level 3 organizations, IT assets become more integrated enterprise-wide. Senior and mid-level IT management understand the business, and the business’s understanding of IT is emerging. SLAs begin to emerge across shared or acted upon. Strategic planning tends to be done at the business unit level, although some inter-organizational planning has begun. IT is increasingly viewed by the business as an asset, but project prioritization still usually responds to “the loudest voice.” Formal IT steering committees emerge and meet regularly. IT spending tends to be controlled by budgets, and IT is still seen as a cost center. But awareness of IT’s “investment potential” is emerging. The business is more tolerant of risk and is willing to share some risk with IT. At the function level, the business sponsors IT projects and career crossovers between business and IT occur. Both business and technical skills are important to business and IT managers. Technology standards and architecture have emerged at both the enterprise level and with key external partners.

Level 4: Improved, managed processes. Organizations at Level 4 manage the processes they need for strategic alignment within the enterprise. One of the important attributes of this level is that the gap has closed between IT understanding the business and the business understanding IT. As a result, Level 4 organizations have effective decision making and IT provides services that reinforce the concept of IT as a value center. Level 4 organizations leverage their IT assets enterprise-wide, and they focus applications on enhancing business processes for sustainable competitive advantage. SLAs are also enterprise-wide, and benchmarking is a routine practice. Strategic business and IT planning processes are managed across the enterprise. Formal IT steering committees meet regularly and are effective at the strategic, tactical, and operational levels. The business views IT as a valued service provider and as an enabler (or driver) of change. In fact, the business shares risks and rewards with IT by providing effective sponsorship and championing all IT projects. Overall, change management is highly effective. Career crossovers between business and IT occur across functions, with business and technical skills recognized as very important to the business and IT.

Level 5: Optimized processes. Organizations at Level 5 have optimized strategic IT–business alignment through rigorous governance processes that integrate strategic business planning and IT planning. Alignment goes beyond the enterprise by leveraging IT with the company’s business partners, customers, and clients, as well. IT has extended its reach to encompass the value chains of external customers and suppliers. Relationships between the business and IT are informal, and knowledge is shared with external partners. Business metrics, IT metrics, and SLAs also extend to external partners, and benchmarking is routinely performed with these partners. Strategic business and IT planning are integrated across the organization, as well as outside the organization.

Figure 65.4 summarizes the results of the 362 Global 1000 companies that have gone through the assessment to date. It illustrates where there is relative agreement regarding which areas are strong and which are weak, and it identifies the gaps between business and IT executive’s opinions. The Y-axis represents the five levels of maturity; the X-axis expands each of the six components of maturity. The maturity elements highlighted in bold tend to be assessed as the strongest, while the italicized elements are those that are assessed as the lowest (hence the areas least aligned). Note that within each of the six components there are diamond lines representing the assessments from IT executives, and circle lines showing the corresponding assessments from business executives. The areas where the circle and
Information Systems and the Domain of Business Intertwined

Diamond lines converge or overlap depict areas where there is the most agreement (and thus synergy) between business and IT. Conversely, areas with large gaps between the circle and diamond lines are the ones that show disagreement among IT and business executives; these are areas that need to be reconciled. For example, Figure 65.4 illustrates a tighter synergy between business and IT in the areas of partnership and skills than for communications. The major elements will be discussed later.

Figure 65.5 summarizes these results by region. A general trend that Figure 65.5 illustrates is that across most components, Asian organizations have higher maturity scores (denoted by circle lines), followed by American and Latin American organizations (denoted by triangle and large diamond lines, respectively), and then European organizations (denoted by small diamond lines). The pattern of maturity scores for Australian organizations (denoted by star lines) reveals that in some dimensions they score as high as or higher than Asian organizations, while for other dimensions they score lower than all other regions. (Since only one African organization is represented in the data, no trends for African organizations are assumed.)

With an overall average maturity score of 3.09, it is clear that there are still opportunities to improve the IT business relationship; alignment is not dead.

A similar graph may be used to plot the responses from an individual organization assessment to identify opportunities for improvement (using the assessment as a prescriptive tool) and to benchmark things such as how a specific organization compares to

- The overall average set of responses
- The responses from exemplar organizations
- Other organizations in their industry (finance, pharmaceutical, utility, retail, healthcare, education)
- Respondents from similar positions (e.g., CIO’s, CEO’s, CFO’s) in other firms

Once the maturity level is understood, the assessment method provides the organization with a prescriptive roadmap that identifies opportunities for enhancing the harmonious relationship of business and IT. This alignment process is expanded in this chapter.
65.4 Six Strategic Alignment Maturity Criteria

This section describes each of the six components (illustrated in Figure 65.2) that are evaluated in deriving the level of SAM. Examples taken from actual assessments illustrate the kinds of insights that can be identified. Most organizations today appear to be around Level 3, as illustrated in Figure 65.6.

FIGURE 65.5 Geographic SAM summary.

FIGURE 65.6 Distribution of SAM scores.
That means that the average results from the 362 Global 1000 companies’ formal assessments (and the several hundred additional informal assessments from multiple years of Society for Information Management surveys) to date are around Level 3. A gradual increase in the overall maturity level over the past decade can be observed in Table 65.1. The results are similar to what has been found by the Carnegie Software Engineering Institute development process model that assesses the comparable stages of application development maturity.

So, while IT business alignment seems to be improving, it is still a pervasive persistent challenge. Naturally, the objective of the SAM model is to identify opportunities to move the organization to a higher level (i.e., higher than Level 3) of SAM. Keep in mind that the primary objective of the assessment is not the maturity level used just as a descriptive tool of an organization's maturity; albeit it provides interesting benchmark comparisons. The primary objective of the assessment is to understand (as illustrated in Figures 65.4 and 65.5) where IT and business executives

- Agree that a criterion needs to be improved
- Agree that a criterion is good, but can be better
- Disagree with how good/bad a criterion is
- Desire to focus their efforts to improve

As illustrated in Figure 65.5, there were differences in the overall SAM alignment scores by region. On average, Asian organizations had higher scores than their American, Australian, and European counterparts. The SAM scores by criteria and by region are summarized in Table 65.2. It is valuable to benchmark organizations by geography as well as comparing alignment trends across the geographies. This will be discussed later.

When there is agreement among the participants regarding the criteria assessment, the model can be used as a prescriptive roadmap to identify how alignment maturity can be improved. However, when there is disagreement, the key stakeholders (i.e., any groups or individuals who can affect or are affected

**TABLE 65.1 Maturity Levels by Year**

<table>
<thead>
<tr>
<th>Years</th>
<th>Number of Companies</th>
<th>% of Companies in Level 1</th>
<th>% of Companies in Level 2</th>
<th>% of Companies in Level 3</th>
<th>% of Companies in Level 4</th>
<th>% of Companies in Level 5</th>
<th>Overall Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000–2003</td>
<td>83</td>
<td>2</td>
<td>20</td>
<td>47</td>
<td>25</td>
<td>6</td>
<td>2.99</td>
</tr>
<tr>
<td>2004–2006</td>
<td>99</td>
<td>3</td>
<td>18</td>
<td>58</td>
<td>20</td>
<td>1</td>
<td>3.06</td>
</tr>
<tr>
<td>2007–2008</td>
<td>64</td>
<td>2</td>
<td>6</td>
<td>77</td>
<td>15</td>
<td>0</td>
<td>3.11</td>
</tr>
<tr>
<td>2009–Present</td>
<td>116</td>
<td>1</td>
<td>24</td>
<td>64</td>
<td>10</td>
<td>1</td>
<td>3.19</td>
</tr>
<tr>
<td>Overall</td>
<td>362</td>
<td>1.25</td>
<td>12.92</td>
<td>56.67</td>
<td>27.92</td>
<td>1.25</td>
<td>3.17</td>
</tr>
</tbody>
</table>

Overall alignment average score: 3.09

**TABLE 65.2 Geography Maturity by Component**

<table>
<thead>
<tr>
<th>Geography</th>
<th>Number of Companies</th>
<th>Communication</th>
<th>Competency</th>
<th>Governance</th>
<th>Partnership</th>
<th>Scope of IT Architecture</th>
<th>Skills</th>
<th>Overall Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Europe</td>
<td>61</td>
<td>2.85</td>
<td>2.63</td>
<td>2.94</td>
<td>2.78</td>
<td>3.01</td>
<td>2.70</td>
<td>2.82</td>
</tr>
<tr>
<td>Australia</td>
<td>28</td>
<td>2.88</td>
<td>3.01</td>
<td>3.15</td>
<td>2.96</td>
<td>2.96</td>
<td>2.68</td>
<td>2.94</td>
</tr>
<tr>
<td>United States</td>
<td>184</td>
<td>2.93</td>
<td>2.93</td>
<td>3.07</td>
<td>3.09</td>
<td>3.12</td>
<td>2.84</td>
<td>3.00</td>
</tr>
<tr>
<td>Latin America</td>
<td>44</td>
<td>3.17</td>
<td>2.94</td>
<td>3.03</td>
<td>3.16</td>
<td>3.27</td>
<td>3.00</td>
<td>3.10</td>
</tr>
<tr>
<td>Asia</td>
<td>44</td>
<td>3.52</td>
<td>3.59</td>
<td>3.58</td>
<td>3.64</td>
<td>3.60</td>
<td>3.55</td>
<td>3.58</td>
</tr>
<tr>
<td>Africa</td>
<td>1</td>
<td>4.0</td>
<td>3.71</td>
<td>4.13</td>
<td>4.4</td>
<td>4.0</td>
<td>4.0</td>
<td>4.05</td>
</tr>
</tbody>
</table>

Overall alignment average score: 3.09
Strategic Alignment Maturity

by IT in the firm) need to understand the points of view of the participants and come to an agreement regarding the criteria and how to enhance it. The organization cannot identify an appropriate road to take if they cannot come to agreement regarding where they want to go. Once the group has identified an agreed to list of areas for improvement, they can proceed to use the model as a prescriptive roadmap. Hence, it is not the maturity “number” that is important. It is what the organization does as a result of identifying how they can work together to improve the alignment maturity.

The next six subsections discuss each of the SAM criteria in more detail and include examples of how they manifest themselves in organizations. These examples have been abstracted from recent research done with a number of major U.S. and global organizations. Table 65.3 summarizes the data from this research across the six SAM components by industry. In terms of their alignment maturity, it is evident that industries can vary considerably in their overall scores. For example, the service sector outperformed the transportation sector by an overall score of 3.31–2.84, while the gap between the retail and educational sectors was almost a full point (3.62 vs. 2.63).

Since this research is still ongoing and the companies that have participated have been assured anonymity, it is not possible to share the specific names of the participating organizations. However, each section illustrates specific issues of SAM that have been uncovered in the research and identifies the industry of the participating organizations.

### 65.4.1 Communications

Effective exchange of ideas and a clear understanding of the key ideas that ensure successful strategies are high on the list of enablers and inhibitors to alignment. Too often, there is little business awareness on the part of IT or little IT appreciation on the part of the business. The 362 Global 1000 benchmark firm results indicate that 21% of the IT organizations either do not understand or have a limited understanding of business, while 39% of the business executives either do not understand or have a limited understanding of IT. Given the dynamic environment in which most organizations find themselves, ensuring ongoing knowledge sharing across organizations is paramount.

<table>
<thead>
<tr>
<th>Industry Name</th>
<th>Number of Companies</th>
<th>Communications Competency</th>
<th>Governance</th>
<th>Partnership</th>
<th>Tech. Scope</th>
<th>Skills</th>
<th>Overall Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retail</td>
<td>10</td>
<td>3.54</td>
<td>3.52</td>
<td>3.70</td>
<td>3.75</td>
<td>3.73</td>
<td>3.45</td>
</tr>
<tr>
<td>Hotel/Entertainment</td>
<td>10</td>
<td>3.23</td>
<td>3.39</td>
<td>3.38</td>
<td>3.49</td>
<td>3.77</td>
<td>3.35</td>
</tr>
<tr>
<td>Service</td>
<td>48</td>
<td>3.26</td>
<td>3.23</td>
<td>3.34</td>
<td>3.36</td>
<td>3.34</td>
<td>3.35</td>
</tr>
<tr>
<td>Insurance</td>
<td>11</td>
<td>3.19</td>
<td>3.34</td>
<td>3.51</td>
<td>3.31</td>
<td>3.34</td>
<td>2.89</td>
</tr>
<tr>
<td>Oil/Gas/Mining</td>
<td>13</td>
<td>3.05</td>
<td>3.31</td>
<td>3.36</td>
<td>3.06</td>
<td>3.37</td>
<td>2.98</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>54</td>
<td>3.21</td>
<td>3.03</td>
<td>3.10</td>
<td>3.15</td>
<td>3.24</td>
<td>3.07</td>
</tr>
<tr>
<td>Financial</td>
<td>106</td>
<td>2.93</td>
<td>2.87</td>
<td>3.13</td>
<td>3.17</td>
<td>3.14</td>
<td>2.82</td>
</tr>
<tr>
<td>Utility</td>
<td>7</td>
<td>3.09</td>
<td>3.21</td>
<td>2.64</td>
<td>2.76</td>
<td>3.40</td>
<td>2.75</td>
</tr>
<tr>
<td>Pharmaceutical</td>
<td>15</td>
<td>2.95</td>
<td>2.77</td>
<td>2.98</td>
<td>2.89</td>
<td>3.00</td>
<td>2.97</td>
</tr>
<tr>
<td>HealthCare</td>
<td>18</td>
<td>2.94</td>
<td>2.85</td>
<td>3.02</td>
<td>2.97</td>
<td>3.04</td>
<td>2.73</td>
</tr>
<tr>
<td>Transportation</td>
<td>21</td>
<td>2.77</td>
<td>2.97</td>
<td>2.82</td>
<td>2.93</td>
<td>2.84</td>
<td>2.68</td>
</tr>
<tr>
<td>Government</td>
<td>9</td>
<td>2.91</td>
<td>2.54</td>
<td>3.03</td>
<td>2.99</td>
<td>2.86</td>
<td>2.49</td>
</tr>
<tr>
<td>Chemical</td>
<td>7</td>
<td>2.75</td>
<td>2.64</td>
<td>2.86</td>
<td>2.81</td>
<td>3.08</td>
<td>2.44</td>
</tr>
<tr>
<td>Telecommunication</td>
<td>11</td>
<td>2.68</td>
<td>2.68</td>
<td>2.94</td>
<td>2.69</td>
<td>3.03</td>
<td>2.44</td>
</tr>
<tr>
<td>Agriculture</td>
<td>11</td>
<td>2.54</td>
<td>2.61</td>
<td>3.13</td>
<td>2.63</td>
<td>2.50</td>
<td>2.41</td>
</tr>
<tr>
<td>Educational</td>
<td>11</td>
<td>2.66</td>
<td>2.46</td>
<td>2.83</td>
<td>2.53</td>
<td>2.72</td>
<td>2.56</td>
</tr>
</tbody>
</table>

Overall alignment average score: 3.09
Many firms choose to employ people in formal interunit “liaison” roles or cross-functional teams to facilitate this knowledge sharing. The key word here is “facilitate.” Some organizations have facilitators whose role is to serve as the sole conduit of interaction among the different units of the organization. This approach tends to stifle rather than foster effective communications. Rigid protocols that impede discussions and the sharing of ideas should be avoided. The 362 Global 1000 benchmark firm results indicate that 54% of the firms identify liaisons as a major opportunity for improvement.

For example, a large aerospace company assessed its communications alignment maturity at Level 2. Business–IT understanding is sporadic. The relationship between IT and the business function could be improved. Improving communication should focus on how to create the understanding of IT as a strategic business partner by the businesses it supports rather than simply a service provider. The firm’s CIO made the comment that there is “no constructive partnership.” However, in an interview with the firm’s Director of Engineering and Infrastructure, he stated that he views his organization as a “strategic business partner.” One way to improve communications and, more importantly, understanding would be to establish effective business function/IT liaisons that facilitate sharing of knowledge and ideas.

In a second case, a large financial services company’s communication alignment maturity placed it in Level 2 with some attributes of Level 1. Business awareness within IT is through specialized IT business analysts, who understand and translate the business needs to other IT staff (i.e., there is limited awareness of business by general IT staff). Awareness of IT by the firm’s business functions is also limited, although senior and mid-level management are aware of IT’s potential. Communications are achieved through biweekly priority meetings of the senior and middle-level managers from both groups, where they discuss requirements, priorities, and IT implementation. But it is still a Level 2 because of the effectiveness of the interaction.

In a third example, a large utility company’s communication alignment maturity places it at Level 2. Communications are not open until circumstances force the business to identify specific needs. There is a lack of trust and openness among some business units and their IT team. IT business partners tend to be bottlenecks in meeting commitments. IT’s poor performance in previous years left scars that have not healed.

From a geographic perspective (as illustrated in Table 65.2), Asian organizations achieved the highest level of maturity in the communications component with an overall score of 3.52, followed by Latin America with a score of 3.17. The United States, Australia, and European scores were 2.93, 2.88, and 2.85, respectively.

### 65.4.2 Competency/Value Measurements

Too many IT organizations cannot demonstrate their value to the business in terms that the business understands. Frequently, business and IT metrics of value differ. A balanced “dashboard” that demonstrates the value of IT in terms of contribution to the business is needed. The 362 Global 1000 benchmark firm results indicate that two-thirds of the firms can improve this important area.

Service levels that assess IT’s commitments to the business often help. However, the service levels have to be expressed in terms that the business understands and accepts. The service levels should be tied to criteria (see Section 65.4.4) that clearly define the rewards and penalties for surpassing or missing the objectives. The 362 Global 1000 benchmark firm results indicate that 63% of the firms can significantly improve their SLAs.

Frequently, organizations devote significant resources to measuring performance factors. However, they spend much less of their resources on taking actions based on these measurements. For example, an organization that requires analyzing ROI before a project begins, but then does not review how well objectives were met after the project was deployed provides little to the project’s success. It is important to assess these criteria to understand (1) the factors that lead to missing the criteria and (2) what can be learned to improve the environment continuously.
Strategic Alignment Maturity

For example, a large aerospace company assessed its competency/value measurement maturity to be at Level 2. IT operates as cost center. IT metrics are focused at the functional level, and SLAs are technical in nature. One area that could help to improve maturity would be to add more business-related metrics to SLAs to help form more of a partnership between IT and the business units. Periodic formal assessments and reviews in support of continuous improvement would also be beneficial.

A large software development company assessed its competency/value measurement maturity at Level 3. Established metrics evaluate the extent of service provided to the business functions. These metrics go beyond basic service availability and help desk responsiveness, evaluating such issues as end-user satisfaction and application development effectiveness. The metrics are consolidated on to an overall dashboard. However, because no formal feedback mechanisms are in place to react to a metric, the dashboard cannot be considered to be managed.

At a large financial services company, IT competency/value was assessed at Level 2 because the company uses cost-efficient methods within the business and functional organizations. Balanced metrics are emerging through linked business and IT metrics, and a balanced scorecard is provided to senior management. SLAs are technical at the functional level. Benchmarking is not generally practiced and is informal in the few areas where it is practiced. Formal assessments are done typically for problems and minimum measurements are taken after the assessment of failures.

Table 65.2 shows significantly different IT competency SAM scores across regions. Asian organizations lead the way with an overall score of 3.59, followed by Australian firms with a score of 3.01; Latin American firms (2.94) are followed closely by American firms (2.93). European organizations scored the lowest in this dimension, with a score of 2.63.

65.4.3 Governance

The considerations for IT governance were defined briefly in Figure 65.1. Ensuring that the appropriate business and IT participants formally discuss and review the priorities and allocation of IT resources is among the most important enablers/inhibitors of alignment. This decision-making authority needs to be clearly defined. The 362 Global 1000 benchmark firm results indicate that 57% of the firms should be improving this important component of alignment.

For example, IT governance in a large aerospace company is tactical at the core business level and not consistent across the enterprise. For this reason, they reported a Level 2 maturity assessment. IT can be characterized as reactive to CEO direction. Developing an integrated enterprise-wide strategic business plan for IT would facilitate better partnering within the firm and would lay the groundwork for external partnerships with customers and suppliers.

A large communications manufacturing company assessed its governance maturity at a level falling between 1 and 2. IT does little strategic planning because it operates as a cost center and, therefore, cost reduction is a key objective. In addition, priorities are reactive to business needs as business manager’s request services.

A large computing services company assessed their governance maturity at Level 1+. A strategic planning committee meets twice a year. The committee consists of corporate top management with regional representation. Topics or results are neither discussed nor published to all employees. The reporting structure is federated with the CIO reporting to a COO. IT investments are traditionally made to support operations and maintenance. Regional or corporate sponsors are involved with some projects. Prioritization is occasionally responsive.

From a geographic perspective (as illustrated in Table 65.2), Asian organizations achieved the highest level of maturity in the governance component with an overall score of 3.58. Australian organizations came in second with a score of 3.15, followed by American companies with a score of 3.07. Latin American and European organizations earned scores of 3.03 and 2.94, respectively.
65.4.4 Partnership

The relationship that exists between the business and IT organizations is another criterion that ranks high among the enablers and inhibitors. Giving the IT function the opportunity to have an equal role in defining business strategies is obviously important. However, how each organization perceives the contribution of the other, the trust that develops among the participants, ensuring appropriate business sponsors and champions of IT endeavors, and the sharing of risks and rewards are all major contributors to mature alignment. This partnership should evolve to a point where IT both enables AND drives changes to both business processes and strategies. Naturally, this demands having a good business design where the CIO and CEO share a clearly defined vision.

For example, a large software development company assessed their partnership maturity at a level of 2. The IT function is mainly an enabler for the company. But IT does not have a seat at the business table, either with the enterprise or with the business function that is making decisions. In the majority of cases, there are no shared risks because only the business will fail. Indications are that the partnership criterion will rise from Level 2 to Level 3 as top management sees IT as an asset, and because of the very high enforcement of standards at the company.

Partnership for a large communications manufacturing company was assessed at Level 1. IT is perceived as a cost of being in the communications business. Little value is placed on the IT function. IT is perceived only as help desk support and network maintenance.

For a large utility company, partnership maturity was assessed at a level of 1+. IT charges back all expenses to the business. Most business executives see IT as a cost of doing business. There is heightened awareness that IT can be a critical enabler to success, but there is minimal acceptance of IT as a partner.

Partnership for a large computing services company was assessed at Level 2. Since the business executives pursued e-commerce, IT is seen as a business process enabler as demonstrated by the web development. Unfortunately, the business now assigns IT with the risks of the project. Most IT projects have an IT sponsor.

From a geographic perspective (as illustrated in Table 65.2), Asian organizations have a partnership maturity score of 3.64. The next closest region was Latin America, with a partnership score of 3.16. The American, Australian, and European partnership scores were 3.09, 2.96, and 2.78, respectively.

65.4.5 Scope and Architecture

This set of criteria tends to assess IT maturity. The extent to which IT is able to

- Go beyond the back office and into the front office of the organization
- Assume a role supporting a flexible infrastructure that is transparent to all business partners and customers
- Evaluate and apply emerging technologies effectively
- Enable or drive business processes and strategies as a true standard
- Provide solutions customizable to customer needs

Scope and architecture were assessed at a level of 2+ at a large software development company. This is another area where the company is moving from Level 2 to Level 3. ERP systems are installed and all projects are monitored at an enterprise level. Standards are integrated across the organization and enterprise architecture is integrated. It is only in the area of inter-enterprise that there is no formal integration.

A large financial services company assessed their scope and architecture at Level 1. Although standards are defined, there is no formal integration across the enterprise. At best, only functional integration exists.
Once again, Asian companies led in this dimension, scoring 3.6 for the scope and architecture component. Latin America came in second, with a score of 3.27, followed by the United States, which scored 3.12. European and Australian organizations scored 3.01 and 2.96, respectively.

### 65.4.6 Skills

Skills were defined in Figure 65.1. They include all of the human resource considerations for the organization. Going beyond the traditional considerations such as training, salary, performance feedback, and career opportunities are factors that include the organization’s cultural and social environment. Is the organization ready for change in this dynamic environment? Do individuals feel personally responsible for business innovation? Can individuals and organizations learn quickly from their experience? Does the organization leverage innovative ideas and the spirit of entrepreneurship? These are some of the important conditions of mature organizations. The 362 Global 1000 benchmark firm results indicate that 55% of the benchmarked firms do not effectively support career crossover opportunities (IT into the business and the business into IT) and that 55% of the benchmarked firms do not effectively support education cross training.

For example, a large aerospace company assesses its skills maturity at Level 2. A definite command and control management style exists within IT and the businesses. Power resides within certain operating companies. Diverse business cultures abound. Getting to a non-political, trusting environment between the businesses and IT, where risks are shared and innovation and entrepreneurship thrive, is essential to achieve improvements in each of the other maturity tenets. Organizational behavior research has demonstrated that sharing information that is based on expertise is often the most successful approach to influencing others to cooperate and trust one another.42

Skills maturity at a large computing services company is assessed at a level of 1. Career crossover is not encouraged outside of top management. Innovation is dependent on the business unit, but in general is not encouraged. Management style is dependent on the business unit, but is usually command and control. Training is encouraged but left up to the individual employee.

Finally, from a geographic perspective, Asian companies earned a maturity score of 3.55. Latin American organizations came in second, earning a score of 3.00. American, European, and Australian organizations received SAM Skill scores of 2.84, 2.70, and 2.68, respectively.

---

**Amazon.com—Alignment Maturity Enables Strategic Transformation**

“I buy books from Amazon.com because time is short and they have a big inventory and they’re very reliable.”

– Bill Gates

“I cannot live without books.”

– Thomas Jefferson

By now, everyone knows the brand Amazon.com and its transformation of the staid world of selling books via the Internet. Even the phrase “being Amazoned” has entered the business lexicon as synonymous with being blindsided by an unexpected competitor that uses e-business as an enabler of strategic transformation of the business (not to mention the industry). Could Amazon.com have impacted its industry as it did without a high level of SAM? Let us look at some facts about
Information Systems and the Domain of Business Intertwined

Amazon—using the SAM criteria discussed earlier in this chapter—that might support the hypothesis that a high level of SAM contributed to Amazon’s ability to transform the book sales industry:

- **Communications**—Jeff Bezos, the founder and CEO of Amazon, understood the power of IT to transform the business of selling books. Understanding of the enabling power of IT by the business (and vice versa) is part of the “warp and woof” of how Amazon operates. Without IT, there is no Amazon.com! Amazon’s initial management team continuously reinforces its entrepreneurial culture with messages to its employees from Bezos and the executive team about Amazon’s vision and philosophy (“being able to buy anything, anytime, anywhere at the greatest store on Earth …”). Employees understand that being with Amazon is about making history.

- **Competency/value measurements**—Amazon passionately focuses on the metrics of excellent customer service and the effectiveness of its advertising strategy. For example, Amazon produces a weekly report that shows the effectiveness of each online advertisement placed in terms of the customer traffic that was generated and the revenue for each customer visit to Amazon’s site. Given the intense competition from other web retailers, Amazon continuously monitors its performance against its rivals and adjusts business processes to set the pace rather than react to changes in the environment.

- **Governance**—Amazon has divided its business into three segments: (1) “mature” businesses such as books, music, and DVDs that have to “pay their way,” (2) “early-stage” businesses such as games, consumer electronics, and home improvement that need nurturing and feeding, and (3) Amazon’s end user–based businesses. This governance model defines how decisions will be made regarding the investment Amazon will make in its IT portfolio and how that investment will be funded (i.e., self-funded or funded from outside investment). It is also clear that Jeff Bezos and a small, tight-knit group of executives make the key strategic business and IT decisions as IT strategy drives the business of Amazon.com.

- **Partnership**—It is clear from Amazon’s business model—which is enabled through IT—that IT is valued as the engine of industry transformation. The high level of partnership between business and IT is driven by the vision of the CEO—Jeff Bezos—and continuously reinforced by Amazon’s ability to coadapt its IT architecture to an evolving business model. Amazon has also heavily invested in other online retailers (members of its “Commerce Network”) to extend its retailing capabilities to other products such as jewelry, consumer electronics, etc.

- **Scope and architecture**—The scope of Amazon’s business and its IT architecture is driven by the external expectations of its customers. Amazon has implemented standard IT architectures around personalization features and order fulfillment that ensure consistent service to customers around the world.

- **Skills**—Amazon is known in the industry as a firm that aggressively recruits people who are bright, energetic, entrepreneurial, and customer-centric. Amazon’s focus on hiring people who are skilled at personalization technologies and other “customer experience” technologies strengthened their brand and their reputation as being “absolutely fanatical about our customers.” Amazon also developed deep expertise in fulfillment technologies (“picking, packing, and shipping”) that are essential to delivering against high customer expectations of service.

In the discussion in the following section, we look at the different levels of SAM using the earlier criteria. What alignment maturity level would you assign to Amazon.com and why?

**Sources:** Harvard Business School Case Study 9-897-128, April 9, 1998
Harvard Business School Case Study 9-800-330, September 5, 2000
65.5 Results by Geography and Industry

As noted earlier, results from the assessment from the 362 Global 1000 companies by region reveal higher alignment scores by Asian organizations across all maturity components. As a group, they scored 3.58, as compared to 3.00 for the United States and 2.82 for Europe. A complete illustration of regional SAM scores by component is shown in Table 65.2 and Figure 65.5.

What was it that made Asian organizations score higher in every SAM component than their European, American, and Latin American counterparts? An examination of the factors that have led to the remarkable success of India’s service sector offers several lessons. A strong culture that promotes communication between employees, the emphasis of CMM/CMMI-based continuous improvement efforts, and well-planned strategies that promote organizational flexibility are just some of the factors that are illustrated in the Wipro sidebar later in this chapter. These cases offer yet more evidence that achieving IT–business alignment is not a matter of finding a single “silver bullet.”

An analysis of SAM data shows that the retail, hotel/entertainment, service, and insurance sectors performed well above the average SAM score of 3.09 in all dimensions. As noted in Table 65.3, these industries scored 3.62, 3.44, 3.31, and 3.26, respectively. (Note: There were relatively few retail and hotel/entertainment companies in the sample, however.) The most well-represented industry in the Global 1000 was the financial industry, which earned an overall SAM rating of 3.01. The manufacturing industry performed closest to the mean, with an overall average of 3.13.

India IT Service Case—Wipro

Wipro is a global IT service company, headquartered in Bangalore, India, that was established in 1945. It entered into IT services in the 1980s. Its revenues have grown at a CAGR of 21% over a six decade period. Today, it is a US$3.47 billion organization with over 66,000 employees with operations in 19 countries.

It is the world’s first PCMM Level 5 software company and the first IT service company to use Six Sigma. Among the top 3 offshore business process outsourcing (BPO) service providers in the world, it has almost 600 clients. Wipro is a strategic partner to five of the top 10 most innovative companies in the world. It is also the world’s first company outside the United States to receive the IEEE software process award. It is the largest independent R&D service provider in the world. It is the first Indian IT service provider to be awarded Gold-Level status in Microsoft’s Windows Embedded Partner Program. It is the first to get the BS15000 certification for its global command center. It has 46 development centers across the globe. It is the pioneer in applying LEAN Manufacturing techniques to IT services.

Communications: Wipro’s Foreign Language Initiative enables IT professionals to communicate effectively with international clients. Employees are encouraged to learn one or more foreign languages. The initiative also helps non-English-speaking IT professionals in the use of English for communicating effectively with business executives, since most of Wipro’s clients are from English-speaking countries.

Value metrics: Wipro wishes to be the “Toyota of business services” and is on track to becoming the world’s most efficient and effective IT service provider. It offers a full portfolio of IT services including systems integration, package implementation, software application development and maintenance, research and development services, and information systems outsourcing across a range of industries delivering benefits for customers with six sigma consistency for global organizations. Using their global delivery model, they have international benchmarks in execution excellence that has translated into measurable results for their global customers, which

(continued)
includes 75% faster time to market, 35% cost savings, and 35% productivity enhancements. Wipro is one of the few Indian IT service firms having adopted web services as an independent practice in its business plan. The IT capabilities are being built around web services–oriented applications and services to its customers. In this context, the confidentiality, security, and integrity of organizations’ data are paramount, especially as data are exchanged across the Internet. Web service standards have gone a long way to address those concerns.

**Skills/HR:** Wipro has opened centers in the United States (Atlanta, Georgia and Troy, Michigan) in a continuing trend of “reverse outsourcing.” Cultural alignment and closer customer relationships are keys to competing successfully in providing high-end consulting services. The recruits for the Wipro’s centers attend 3 months of training in India before starting jobs in the United States in software development and project management. Wipro is also scouting for training sites in the United States. Further, the opening of U.S. centers is also an alternative to getting visas for workers, since getting work visa these days is getting competitive. It has also earmarked as much as $250 million for expansion in Europe through acquisitions (mainly in Germany).

IT Service companies such as Wipro ensure that they are able to have a continuous flow of new engineers and IT people by reaching into India’s “second-level” engineering colleges to hire people before their last semester of study and then provide job-related course materials and training for that last semester. International campus hiring has also been initiated across the United States, Europe, and Asia to attract top talent. By doing so, Wipro is able to get commitments from students as they are just becoming ready to take on their first jobs after graduation, and with less in-house training. Only 1 out of 10 candidates gets interviewed, following a 1:50 ratio of resumes scanned, all enabled by IT.

HR counsels every employee on their strengths and weaknesses based on their profile by providing a map of courses to take at Wipro. There is a 40 day “Project Readiness Program” for new IT employees. Also, online study is encouraged. Wipro supplements a continuing education program for those who choose to enroll at leading educational institutes to obtain special skills in areas such as project management. At the leadership institute for senior managers, managers teach other managers business skills. Five percent of billable time is spent on training. The Chairman of Wipro himself spends half a day of his personal time teaching in every leadership program. Wipro offers 100,000 person days of training a year.

**Partnership:** At Wipro, everyone is encouraged to come up with big or small ideas, which would improve serving the customer/client. The idea is not to break new ground in basic knowledge, but in improving customer service. Wipro ties the rewards to performance.

An entry-level IT person moves onto a higher salary/benefits curve as they progress in completing assigned course/seminars that are geared to transform them from a computer science/engineering/business graduate into a software engineer. The “Wipro Equity Rewards Trust” plan gave Wiproites the benefits of participating in the wealth creation back in the 1980s. The stock option along with Quarterly Performance Linked Compensation (QPLC) provides innovative idea for linking Wipro’s performance with employee compensation.

**Governance:** Wipro’s technical competency lies in its ability to apply formal processes to ensure on time delivery, significant investments in accelerators, and partnerships and alliances. For Wipro, the nature of client trust is very important. IT tries to look at the problems the clients (internal and external) are experiencing and invites them to discussions to identify opportunities for the
Strategic Alignment Maturity

65.6 Strategic Alignment as a Process

Attaining and sustaining business–IT alignment must first focus on understanding the current level of SAM. This should be followed by steps that concentrate organizational energy on maximizing alignment enablers and minimizing inhibitors. This process embraces the steps illustrated by Figure 65.7 and elaborated in the following text:

1. Set the goals and establish a team. Ensure that there is an executive business sponsor and champion for the assessment. Next, assign a team of both business and IT leaders. Obtaining appropriate representatives from the major business functional organizations (e.g., marketing, finance, R&D, and engineering) is critical to the success of the assessment. The purpose of the team is to evaluate the maturity of the business–IT alignment. Once the maturity is understood, the team is expected to define opportunities for enhancing the harmonious relationship of business and IT. Assessments range from 3 to 12 half-day sessions. The time demanded depends on the number of participants, the degree of consensus required, and the detail of the recommendations to carry out.
2. Understand the business–IT linkage. The SAM Assessment is an important tool in understanding the business–IT linkage. The team evaluates each of the six criteria. This can be done via executive interviews, group discussion, a questionnaire, or a combination. A trained facilitator can be valuable in guiding the important discussions.

3. Analyze and prioritize gaps. Recognize that the different opinions raised by the participants are indicative of the alignment opportunities that exist. Once understood, the group needs to converge on a maturity level. The team must remember that the purpose of this step is to understand the activities necessary to improve the business–IT linkage. The gaps between where the organization is today and where the team believes it needs to be are the gaps that need to be prioritized. Apply the next higher level of maturity as a roadmap to identify what can be done next.

4. Specify the actions (project management). Knowing where the organization is with regard to alignment maturity will drive what specific actions are appropriate to enhance IT–business alignment. Assign specific remedial tasks with clearly defined deliverables, ownership, timeframes, resources, risks, and measurements to each of the prioritized gaps.

5. Choose and evaluate success criteria. This step necessitates revisiting the goals and regularly discussing the measurement criteria identified to evaluate the implementation of the project plans. The review of the measurements should serve as a learning vehicle to understand how and why the objectives are or are not being met.

6. Sustain alignment. Some problems will just not go away. Why are so many of the inhibitors IT related? Obtaining IT–business alignment is a difficult task. This last step in the process is often the most difficult. To sustain the benefit from IT, an “alignment behavior” must be developed and cultivated. The criteria described to assess alignment maturity provide characteristics of organizations that link IT and business strategies. By adopting these behaviors, companies can increase their potential for a more mature alignment assessment and improve their ability to gain business value from investments in IT. Hence, the continued focus on understanding the alignment

---

**FIGURE 65.7** Strategic alignment as a process.

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Set goals and establish the team</td>
</tr>
<tr>
<td>2.</td>
<td>Understand business-IT linkage</td>
</tr>
<tr>
<td>3.</td>
<td>Analyze and prioritize gaps</td>
</tr>
<tr>
<td>4.</td>
<td>Specify the actions (project management)</td>
</tr>
<tr>
<td>5.</td>
<td>Choose and evaluate success criteria</td>
</tr>
<tr>
<td>6.</td>
<td>Sustain alignment</td>
</tr>
</tbody>
</table>
Strategic Alignment Maturity

maturity for an organization and taking the necessary action to improve the IT–business harmony are keys. Implicit in this is to periodically repeat the process to see how the organization evolves over time.

Fundamental to the effective use of the SAM assessment is not only to measure the maturity level of IT–business alignment but also to identify the problem/opportunity areas; and more important use the model as a roadmap to define specific initiatives for improvement. Repeating the assessment periodically can be insightful.

For example, when the SAM model was first used to assess the level of alignment maturity for a large financial company (fictitiously referred to as Stonehenge), they were assessed at Level 2 (committed processes). At the time, Stonehenge had recently adopted the federated IT organization model, so no one considered that the IT organization structure would be the area to consider in identifying why this financial giant was only at Level 2. After all, the federal (or hybrid) IT organization design has been found to produce higher alignment maturity scores over centralized and decentralized IT organization alternatives, because it captures the benefits of both centralized and decentralized IT organizations. The federated IT organization deployed at Stonehenge essentially centralized IT architecture and common systems, while decentralizing the strategic business unit applications and resources. The centralized IT structure supports the development of strong and efficient IT infrastructures while the decentralized IT group fosters business–IT relationships. Following the aforementioned logic, Stonehenge had decentralized its formally centralized application development staff, expecting that the relationships with the business management would improve. However, the analysis of the Stonehenge SAM assessment data showed the following:

- The indicators that measure the understanding of business by IT and the understanding of IT by business, which are covered in the “communications” area of the SAM model, were very low. Knowledge sharing in the organization was at a minimum to none. IT and business met occasionally (only during major walkthroughs) in a formal setting.
- IT–business relationship and trust measures that are covered under the “partnership” area were also at the minimum. Business viewed IT as a cost of doing business. There was an ongoing conflict between business and IT; they blamed each other for every late or unsuccessful delivery.
- Competency metrics—Measuring value of IT area showed that IT operated as a cost center.
- Social interaction indicator, which is covered under the HR area, was pointing to minimal IT–business interaction.

These and several other criteria used in the assessment suggested that there was conflict in the IT–business relationship in Stonehenge and that trust levels were at a minimum—typical in a centralized IT organization with poor linkages between business and IT. The fact that the company had already adopted the federated model motivated managers to further analyze the data to find out why the relationship with the business management did not improve.

Several other indicators, such as the differences between the IT and the business managers’ opinions and the differences between the top and the middle managers’ opinions in the SAM model, pointed to the problem in the implementation of the federated model. Looking at the organization charts and the grouping of the departments, they seemed in line with the federated model, meaning that the application development groups were created within the business units and dual reporting relationship for the divisional IT heads was created. Yet, the location of the development teams and the way they were functioning were not different from what they would be like in a typical centralized IT organization. At the end of the study, it was apparent that the management could not diverge from the routine they followed for many years. Indicators such as the tendency of the employees’ resistance to change (measured in the HR area) were also in support of this hypothesis.

As illustrated in this example, SAM not only helped identify Stonehenge’s maturity score, but it also allowed managers to identify specific problems and opportunities to improve the IT–business alignment.
Once again, organizations should not be in pursuit of a silver bullet. All six components of alignment maturity should be considered to determine the areas that require improvements and the opportunities that exist to help improve the IT–business alignment maturity level of the organization.

The periodical SAM measurement and results at Stonehenge are reviewed by both business and IT managers to ensure appropriate alignment. SAM provides guidance for business changes as well for a better alignment. SAM assessment should be considered as a continuous process of improvement in the organizations facing turbulent changes in business environment to enable organization-led increased SAM in the organization.

### 65.7 Strategic Alignment Maturity and Business Performance

The concept of performance underlies a lot of the research in strategic management and information science. A broader conceptualization of business performance would include emphasis on indicators of operational performance in addition to indicators of financial performance. Under this conceptualization, it would be logical to treat measurements such as market share, new product introduction, product quality, marketing effectiveness, manufacturing value added, and other measurements of technological efficiency within the domain of business performance.

Research done by Luftman et al. validated the contribution of SAM to company performance based on the data gathered from 362 global organizations across four continents. The research identified that the six SAM components (communications, IT governance, value, partnership, technology scope, and skills) have approximately equal contribution to form the overall SAM score and they are strongly correlated to each other, as illustrated in Figure 65.8 through 65.10. Regarding the relationship of SAM and company performance, the regression weight (0.34) for SAM in the prediction of performance is significant; hence, this proves the contribution of SAM as a major contributor to a company's performance (see Figure 65.8). This relationship was found to be valid across all industry types, cultures, and geographic locations.

In addition, research has shown that the organization’s structure—whether it follows a centralized, decentralized, or federated model—also has an impact on SAM maturity (see Figure 65.10). Notably, companies with federated IT structures are able to combine the benefits of centralized structures

---

**FIGURE 65.8** Structural equation model validation (1).
Strategic Alignment Maturity

Performance

Communications
Value measures
IT governance
Partnership
Tech scope
HR/skills

Return on equity 0.12 Return on assets

FIGURE 65.9 Structural equation model validation (2).

Structural equation model validation with organization and reporting structure

FIGURE 65.10 Structural equation model validation (3). (From Earl, M.J., Corporate Information Systems Management, Richard D. Irwin, Inc., Homewood, IL, 1993.)
65-24

Information Systems and the Domain of Business Intertwined

(such as standardization and economies of scale) and decentralized structures (local flexibility and control). These companies tend to have higher alignment maturity ratings.²⁴

This relationship also supports the contention that achieving alignment is not a matter of addressing a single "magic bullet" issue. If IT–business alignment leads to better performing organizations, then the implication is inescapable. An organization that fixates on one component at the expense of others is all but certain to be an underperforming organization.

This research builds upon the work done in 1993 by Henderson and Venkatraman,²³ whose strategic alignment framework was based on four components: business strategy, IT strategy, organizational infrastructure, and IT infrastructure. This was the first time that a strategic alignment framework was used by both researchers and practitioners in the field.

65.8 Conclusions

Achieving and sustaining IT–business alignment continues to be a major issue. Experience shows that no single activity will enable a firm to attain and sustain alignment. There are no silver bullets. The technology and business environments are too dynamic. The research to derive the business–IT alignment maturity assessment has just begun and the tools and processes are still being refined.

Much work still needs to be done to refine hypotheses around SAM and to measure its impact on organizations and their ability to execute strategy.

Research conducted over the course of a decade clearly shows that companies are getting better at aligning their business and IT; albeit alignment is still a pervasive and persistent problem. Overall maturity scores have increased from 2.99 in 2000–2003 to 3.17 in 2009–2010. There is evidence that higher levels of alignment have positive effects on company performance regardless of industry type or organization structure. However, results from the assessment of 362 Global 1000 companies demonstrate that some industries clearly do a better job of aligning their IT and business operations than others. Additional studies have linked high alignment maturity levels with better company performance measures, including sales, productivity, ROI, ROA, ROE, and NPM. The research also indicates that there are differences by region. This suggests that the strategic alignment of a company may depend both on industry norms and on local factors.

Achieving significantly higher levels of IT–business alignment across a wider range of organizations is a long-term journey. The journey in each organization begins with a complete assessment of how business views IT, and how IT views business. The journey continues with how business and IT executives work together to close the gaps and improve the performance of the organization. In the quest for continuous improvement within a dynamic global environment, the journey may never end.

References

7. Liebs, S. We’re all in this together, Information Week (October 26), 8, 1992.


