respondent noted: "I can say that almost across the board for IT personnel we oversell, we promise more than we can really do. We try to get the business a lot of the time—of course we are vendors, we provide services, but even for in-house MIS organizations, we over-promise. IT people do not give a real picture to the users about the project challenges, and I think that's a major, major problem."

On the surface, it might not seem so surprising that implementation managers would try to shift the responsibility for problems in their projects away from themselves. But there was a strong consensus among respondents that the issue of overselling or over-promising was almost endemic in the industry, with the pressures to win business, and the desire to satisfy customers often outweighing more cautious responses to client requests for proposals. Indeed, respondents were honest about their own tendencies to present the "best picture" when they themselves had been involved in pre-sales work.

The best way to avoid underestimation of project budgets and schedules is to do the pre-sales requirements analysis as thoroughly as possible, but this is costly, particularly if the bid is not successful. Even if a thorough pre-sales analysis is completed, the final bid may need to be cut in order to make it competitive. Some readers might assume this problem would most likely occur with small vendor firms, since they are most likely to be hungry to win a bid. However, my data suggests that large firms are not immune to this problem. In fact, six of the eight projects where schedule or budget continued to be a problem after mitigation were large firms that had well-established procedures aimed at minimizing potential problems flowing on from the pre-sales stage.

This apparent failure of mitigation actions taken at the pre-sales stage to prevent the occurrence of schedule and budget problems highlights the critical importance of this risk. Respondents suggested the most effective approach to address this issue was to separate the requirements specification part of pre-sales work into a standalone, chargeable consulting activity. This pre-project partnering approach has been recommended by other researchers [3] as an effective strategy for improving subsequent project performance. It has

Figure 2. Unforeseen problems arising during the project.

the advantage for the vendors of supporting them in gaining an in-depth understanding of the client's requirements, while at the same time allowing the clients to assess the type of working relationship they could expect from the vendor without having to make a full commitment to the vendor for the entire project.

UNFORESEEN PROBLEMS

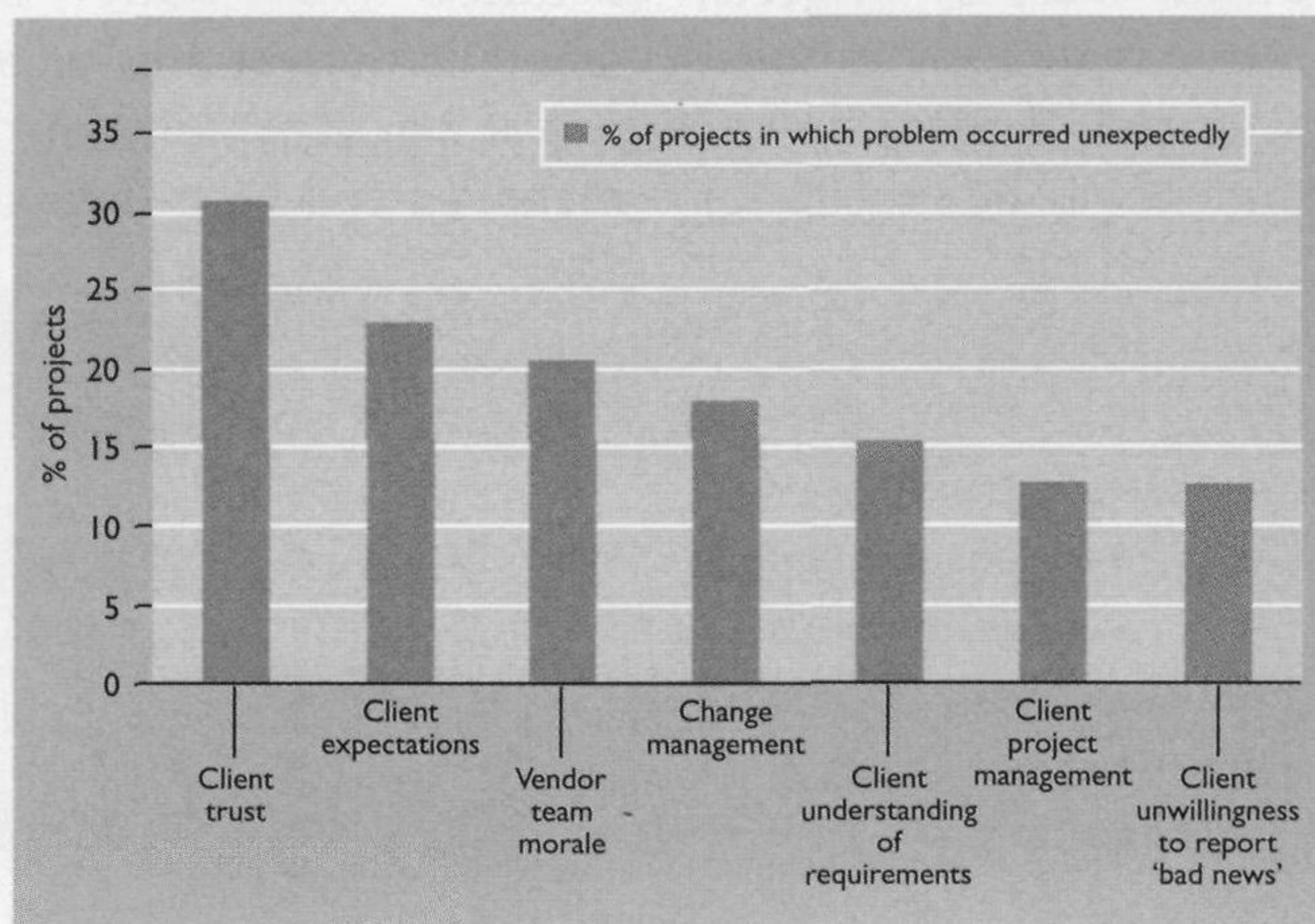Given the tendency to "paint a rosy picture" to clients at the start of projects, it is not surprising that the most common unforeseen problems tended to be client relationship problems, as shown in Figure 2. Client relationship problems appeared unlikely to be expected at the start, partly because signs that such problems might occur are typically not evident early in the vendor-client relationship, and also because their intangible nature makes them difficult to quantify and assess. Respondents typically expressed some surprise that these problems had arisen during the course of a project and it seemed that such problems were difficult to identify at the early stages of the project, when both sides were eager to negotiate a deal and as such were, perhaps, on their best behavior. Indeed, one respondent commented: "It's almost like a marriage, it starts off very, very happy, everybody has a rosy picture about what's coming down the pike ..."

With the exception of client expectations, the set of problems that occur unexpectedly in projects is quite different from those that arise in spite of being anticipated and mitigated. The predominance of client relationship problems in Figure 2 supports the need for strong measures to meet the relationship needs of client staff [6]. Clearly, project managers would be well advised to pay attention to relationship issues both with their client and within their own team at the start of the project, and to take steps to ensure those relationships are well founded right from the start.

The client expectations factor was also a key factor in "troubled" projects, as seen by a number of respondents as one of the key areas for managing risk.

TROUBLED PROJECTS

The 10 troubled projects were of particular interest, since they came close to failure, and the assessments