

MANAGEMENT

Teamworking is not rocket science

It has now been demonstrated that construction meetings work better when they are not dominated by a few individuals. **Jason Foley** and **Sebastian Macmillan** of Cambridge University reports on a study of meetings on the National Space Centre project, which concluded that a cultural shift to collective decision making is needed.

'What happens when people are locked together by force of circumstance in a working association into which not one with any advanced knowledge would have entered freely?'

Belbin's question illustrates very clearly the problems which new teams face when they are formed to tackle a complex construction project.

As part of a jointly funded DETR and EPSRC research project at Cambridge University, entitled 'measuring the effectiveness of interdisciplinary teamwork in construction', we set out to discover what happens in project team meetings when consultants come together during a complex construction programme.

During the year-long construction phase of the National Space Science Centre in Leicester (see page 15 for full article), we were able to monitor

four different types of meetings, with the aim of identifying interactions between the parties. Table 1 and Fig. 1 illustrate variations in team interactions across the different meeting types.

Mapping interaction patterns

The combined communication input for the three main players in the team—the contractor, architect and project management—amounted to 78%. Surprisingly, a clear pattern emerged in the form of a triangle focussing on these three team members. The triangulation of interaction in a team averaging eight consultants is surprising if only for its very defined pattern (see Fig. 2).

However, the apparent total domination of three team members suggest that purely construction issues may not be the reasons for such a defined pattern. After all, there were four different meeting types and three distinct types set

up by the team itself. Could it be the nature of the project that the team were involved with, or was it the nature of the individual parts that made up the team?

Work undertaken with our industry partners suggest that these are common findings in teamworking during the early stages of a project, as this quote from a team member indicates.

'Early in the project was when team members didn't know each other; and when respective organisations were being more protective of themselves regarding their own interests. There was, therefore more polarisation and less positive teamworking.'

Encouraging a cultural shift

So, how can we forge teamworking interactions that are based on integration and support?

The dominance of particular interests is, in part, an inevitable consequence of the information that has to be transmitted from one key party to another. However, when proceedings are dominated by a few interests and the communication pattern is too restricted (Fig. 1c), conflict in the team is more likely.

In the strategy/problem solving meeting (Fig. 1d) the communication patterns are more elaborate and rich. More players had the opportunity to contribute to ideas, suggestions and solutions. At the conclusion of this particular meeting, it was suggested by the whole team that they had performed more satisfactorily than during any other meeting type.

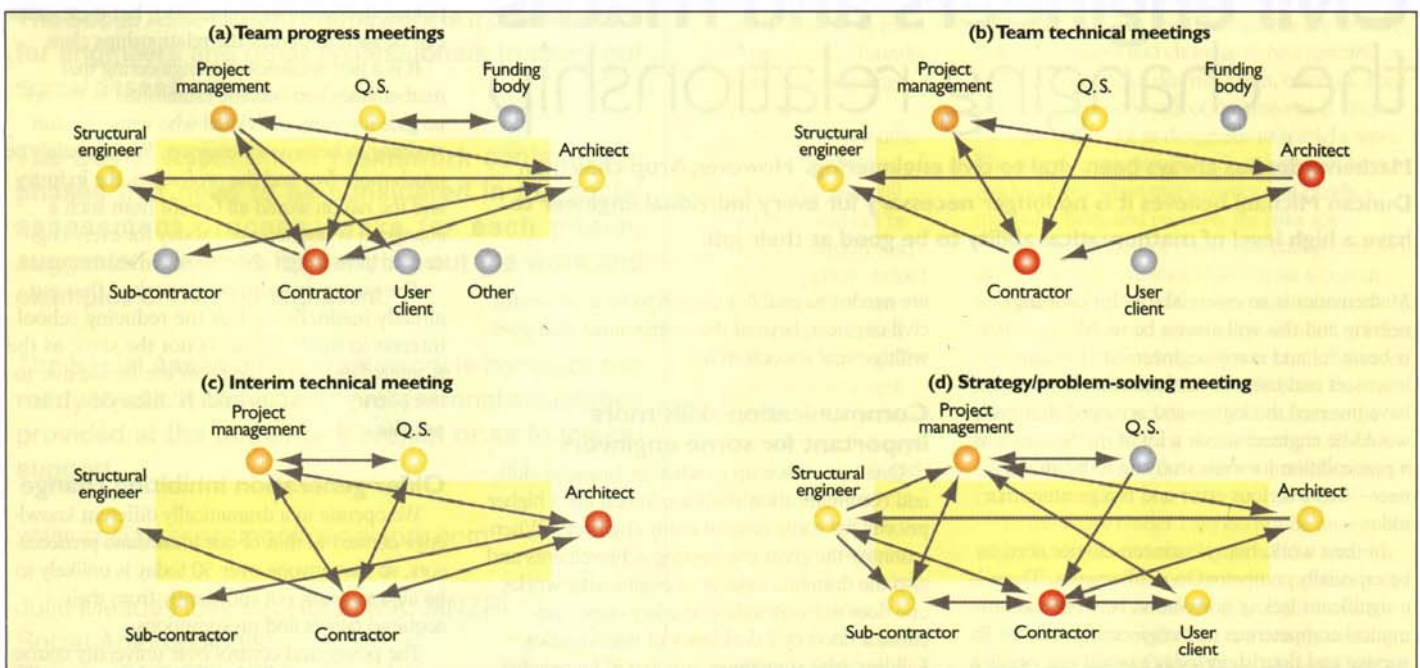


Fig. 1 Different interaction patterns between parties in each meeting type - (a) team progress, (b) team technical, (c) interim technical, (d) strategy/problem-solving

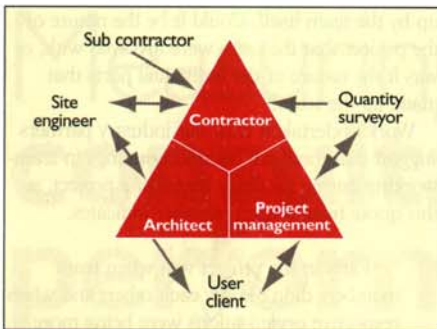


Fig. 2. The 'golden triangle' pattern, showing the core group within the team and communication interaction with other team members

How individuals act within a team is affected by the uncertainty surrounding individual behaviour in the context of the integrated group. If the 'project team' is to be more than a symbolic reference to a set of individuals working on the same project, then the process and success of communication rely on interaction where relationships are based on the contributions and skills of each other.

A willingness among the parties to communicate ideas and proposals across discipline boundaries needs to be acknowledged as necessary to

Table 1: Communication input

Team member Discipline	Communication input				
	Progress meetings	Technical meetings	Interim technical meetings	Strategy meetings	All meetings
Contractor	46%	37%	29%	27%	40%
Project Management	15%	14%	15%	21%	17%
Architect	16%	33%	37%	16%	21%
Structural Engineer	9%	7%	6%	18%	10%
Quantity Surveyor	8%	5%	6%	2%	6%
User Client	3%	3%	0%	9%	3%
Funding Body	1%	1%	0%	0%	1%
Sub-contractor	1%	0%	7%	7%	2%
Other	1%	0%	0%	0%	0%
Total time observed in meetings	14h 25min	2h 55min	2h 40min	4h	24h

the whole enterprise—in short a cultural shift to collective thinking. As Nick Raynsford suggested, writing in the IUK-Construction brochure

'The one ingredient vital to the improvement of competitiveness is the creation of networks of firms to share practices that have made them successful. By pooling the collective practice of the industry, individual companies can continuously improve their performance.'

Arising from the study, the researchers have devised a simple self-assessment tool to help teams identify whether they are pooling their resources effectively and harnessing the combined expertise of all the parties.

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