In response to current industry challenges, mining companies are looking at alternative delivery models to drive down costs and manage their risks. At Turner & Townsend we see a trend away from traditional EPCM models and towards EPC lump sum models or other hybrid models, with the owner teams of mines taking more responsibility to manage contractors on projects.

In these instances - and despite the relative constant structure of owner teams across the functions of project management, construction management, HSEC and HR/IR, quality, engineering and commissioning, project controls, contracts and procurement, and commercial and legal - mining companies will need to reconsider the appropriate size of their teams.

Our statistics show project management cost ratios to be between five and nine percent of the construction cost and project management hour ratios to be between 15 and 25 percent of direct man-hours. However, project costs and direct labour hours are not the only factors determining owner team size.

Turner & Townsend believe the size of these functions to be dependent on a set of 5 factors.

1 Market conditions
Where productivity issues and/or workforce skill-level are low in the field, a larger owner team is required to manage through such issues. From the owner’s project management perspective, if mines have access to experienced and multi-disciplined personnel then the team size should reduce.

2 Project complexity
Brownfield projects; projects with multiple interfaces; those using new technology; and those where the location is remote, are all examples of complex types of projects requiring large owner teams.

3 Supply chain confidence
Owner teams concerned with claim savvy contractors or untried contractors will both require larger management teams, either to form the necessary controls and/or to have more focus on quality and performance management.

4 Project risk appetite
All projects sign-up to risk mitigation requirements identified as part of managing against their project risk profile. The size of owner teams in certain areas will be dictated by the risks requiring mitigation by their team.

5 Execution strategy
The composition of owner teams will look very different if the project is cost driven compared to time driven. The degree of front-end loading will also influence owner team size, with larger teams required in execution if front-end loading is low.

Figure 1 below shows how much these factors play out in reality as the size of the owner’s management team ebbs and flows in response to the five drivers.
Once owner team size is determined, the next step is to decide who will fill the roles? Will they be insourced or outsourced or a hybrid of the two? Our experience shows that a separate set of factors drive the outcome to this decision.

These are detailed in the table below:

### Table 1: Insourcing versus outsourcing

#### Governance and assurance
- Are there roles that may not be outsourced from a governance perspective? Are Joint Venture parties committed to provide roles to the team?

#### Tools, processes and procedures
Across which functions are the mine’s in-house tools, processes and procedures sufficiently mature to self-deliver?

#### Competency
Across which functions are in-house competencies of the mine staff strong or weak?

#### HR strategy
Are there restrictions on internal headcount? Are certain functions deemed not be to core to the business?
Fundamentally, the size and composition of an owner’s management team is a key enabler to delivering successful outcomes. Through understanding the project, the supply chain and an organisation’s readiness to manage the two, you can establish the optimum size team to deliver better than your baselines, supporting a return on investment to your shareholders.

Turner & Townsend has the capability to benchmark owner team sizes within infrastructure, oil and gas and mining projects, and would be happy to discuss our experience and approach with interested parties.

For further information on any of our services visit our website
www.turnerandtownsend.com

About Turner & Townsend

Turner & Townsend is an independent professional services company specializing in programme management, project management, cost management and consulting across the natural resources, infrastructure and property sectors. With 90 offices in 38 countries, we draw on our extensive global and industry experience to manage risk while maximizing value and performance during the construction and operation of our clients’ assets.

The mining and metals sector faces a unique combination of pressures as it strives to meet the cyclical nature of commodity supply and demand. A critical lever in the cycle is capital programme strategies, management and execution. Within each cycle the drivers behind on-budget cost and on-time schedule fluctuate in emphasis, whilst sustainability and safety remain paramount. It is against this backdrop that Turner & Townsend seeks to assist owners’ teams and engineers in the following areas:

- Managing and supplementing study teams to achieve success at gateway stage pre the final investment decision
- Setting up programmes with the owners
- Advising owners teams from contracting strategy through to dispute resolution
- Managing streams of work within the programme to achieve successful commercial outcomes
- Adding scarce skills to programme owners teams to achieve programme goals
- Assuring work undertaken to date
- Assisting funders and other stakeholders requiring assurance that their investments will yield anticipated returns
- Providing project benchmarking including accurate comparisons against similar assets and insight into how an asset is performing, to support our clients to make intelligent investment decisions

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