

IP management within complex supply chain environments

With more businesses relying on extensive relationships with subcontractors, it is vital that potential IP issues in supply chain agreements are handled in a sophisticated and flexible manner

By **Stephen Manton**

Where organisations have a high dependency on their subcontract chain, it is important to establish a contractual and working relationship in which intellectual property is managed to:

- Guard against the development of monopolies and dependencies that reduce competitive pressures and hence increase costs.
- Encourage and reward subcontractor innovation.
- Enable knowledge sharing, while maintaining clarity of rights and obligations.
- Show the flexibility need to vary standard IP terms and conditions where necessary to optimise the overall terms of any agreement.

These objectives can be met only when there is joined-up decision-making between the commercial, technical and delivery areas; with projects and functions giving early consideration to the issues that will inform the IP provisions of any contracts they will let.

Decisions on individual contracts' terms will also need to be informed by an overarching commercial strategy which identifies the technical and business areas where flexibility can be shown to subcontractors, for example, when rights can be granted to arising IP.

Defining the role of subcontractors

The role subcontractors are expected to play in key business activities should be debated early, often long before the procurement strategy would traditionally be prepared. For example, it should be decided at the very outset of design-and-build projects whether contractors should be involved in optioneering, developing an outline design, carrying out detailed design, or just manufacturing to a fixed design. Without this rigour choices will be made – and options lost – without appropriate oversight and debate.

Key business processes, such as stage gate systems, should therefore expect to see a statement of the role to be played by subcontractors. This will help to ensure options and uncertainties are highlighted, which will enable an approach to be taken that is in the interests of the organisation as a whole. This evolving statement or description should consider a range of issues. These include:

- Will the results of work placed with subcontractors have application outside of the commissioning project or function? If so what action should be taken to ensure the organisation can fully leverage the results?
- Are there strategic reasons to keep work in-house rather than give to subcontractors; for example, to enable the development or maintenance of skill centres?
- Will commercially sensitive information be released to subcontractors? If so is this in the interests of the wider organisation?

Indeed, it may make sense for projects and functions to have an intellectual property plan, describing the actions that will be taken to manage all the IP they will access or generate. This document should

be reviewed within the organisation's stage gate system (or similar) with template IP plans and crib-sheets used to ensure gatekeepers and managers are aware of the key issues that should be addressed. In practice, it is impossible to prepare a universal description of an IP plan that will be relevant to all organisations and markets. However, the following are indicative of the type of issue they should address:

- Could competitor, customer, partner, supplier and distributor's access to, and ability to copy, key intellectual assets impact on commercial success? If so, are intellectual property rights and commercial secrecy being used to minimise this threat?
- Are the intellectual assets generated or accessed free of third-party rights that would hinder their use?
- Will the intellectual assets needed be available when required?
- Should the project or function be importing existing, or sharing arising, intellectual assets with the rest of the organisation, subcontractors or third parties?
- Will any product or service make use of a new brand or expand the use of an existing brand?

Commercial strategy

Not only should projects and functions give early consideration to the role that subcontractors will play in meeting their local objectives and targets, but the organisation itself should take a strategic view of the role played by subcontractors. From an IP perspective, this strategy should address a number of topics. For example, the technical areas and circumstances in which subcontractors will be allowed to retain ownership of or rights to IP they create is something about which a company has to be absolutely clear. Then there is the decision-making rationale that should be followed when determining the extent of the rights that will be sought to any subcontractor's background IP. In addition, the company must decide what internally developed IP should be available for licensing to the subcontract chain; for example, to help develop an industry standard, to generate licensing income or to enable a technology's development.

Ownership and rights to improvements

Allowing subcontractors to retain ownership of, or rights to, IP they create can encourage them to invest in and so improve technology. However, it can also reduce competitive pressures and even enable

subcontractors to compete with their customers. Organisations should therefore have a clear commercial strategy, or decision-making rationale, defining the circumstances under which IP rights can be ceded to their subcontract chain.

This strategy should be informed by a clear understanding the organisation's differentiating and enabling capabilities.

Differentiators can be defined as capabilities where exclusive rights/access is required because this does, or should, provide commercial advantage. Differentiators are those capabilities that an organisation will often wish to own or control.

Enablers can similarly be defined as capabilities with limited availability that are important in the delivery of the organisation's products and services. Enablers are those capabilities that an organisation may decide to encourage its subcontract chain to develop or enhance. Relevant enablers should therefore have a clear strategy defining the actions that will be undertaken to encourage the development of a competitive or robust supply chain. This would include, for example, whether ownership of innovations should be retained with view to licensing to multiple parties.

Beyond a decision on who should own and have rights to arising IP, it is clearly important to have sight of subcontractor-created IP and know-how. While contracts invariably require subcontractors to report arising IP, are the expectations clearly defined and in practice how often is such information supplied? Typically a contract will simply require the subcontractor to report "arising IP". Because of the broad definition typically used this is often an impossible obligation to meet. Perhaps instead the contract could provide clearer expectations. For example, should the notification be limited to: potentially patentable inventions; innovative mechanical devices, chemical processes (etc) that might have application in the customer's plant, products, services or processes; and/or working practices/procedures that could reduce costs, uncertainties or risks? Further, to minimise under-reporting it is worth considering whether subcontractors should be required to provide confirmation that there is no arising IP if they believe this to be case.

But regardless of the quality of the information provided by subcontractors, the submission will be of value only when it is clear who is responsible for its internal review and dissemination. Therefore, it may make sense to define the

role of the demander (the individual commissioning the contract) formally. This could include stating specifically whether this person is responsible for ensuring that:

- Appropriate action is taken to share knowledge created by the subcontractor. This could be by making presentations at relevant existing forums, holding one-off briefings, sending emails and adding information to existing databases (eg, learning from experience (LFE)).
- Knowledge transfer takes place from the subcontractor where required to enable follow-on work to be completed.
- The subcontractor fully reports any arising IP before payment of the final invoice is authorised.

Rights to subcontractor’s background intellectual property

In general, a purchaser will require the ability to exploit the results of any contract freely. This implies securing greater or lesser rights to subcontractor background IP. However, it may be inadvisable to insist on acquiring rights that are so extensive that subcontractors are discouraged from offering innovations either within submitted bids or while working under a contract. The procurement process therefore needs to highlight instances where pursuing wider rights could create such disincentives.

Depending on the circumstances, it may be appropriate to secure rights to subcontractor’s background IP as needed:

- To enable the customer, and its licensees, to exploit the results anywhere.
- To enable the customer to exploit the results anywhere.
- To enable the customer to exploit the results internally.
- To enable the customer to exploit design, build, commission, operate and repair a single plant/facility (ie, a single act).

There will clearly be situations where it may be necessary to agree to the payment of a royalty if background IP is widely disseminated and exploited. Again, it is important that there is a clear overarching strategy defining the areas where greater rights need to be sought. Individual projects should not be allowed to secure only minimal rights if the organisation has wider aspirations.

While it is customary to require subcontractors to report arising IP, it may also be desirable to require explicitly the

identification of any subcontractor-owned background IP that will need to be accessed to exploit the results. This is especially important where there could be confusion between the subcontractor’s existing IP and any IP created under the contract; and so that the customer can identify, and prioritise, any actions that are needed to transfer/duplicate IP assets that will be required during exploitation of the results.

The level of detail needed in such a notification is clearly only that required to meet these objectives.

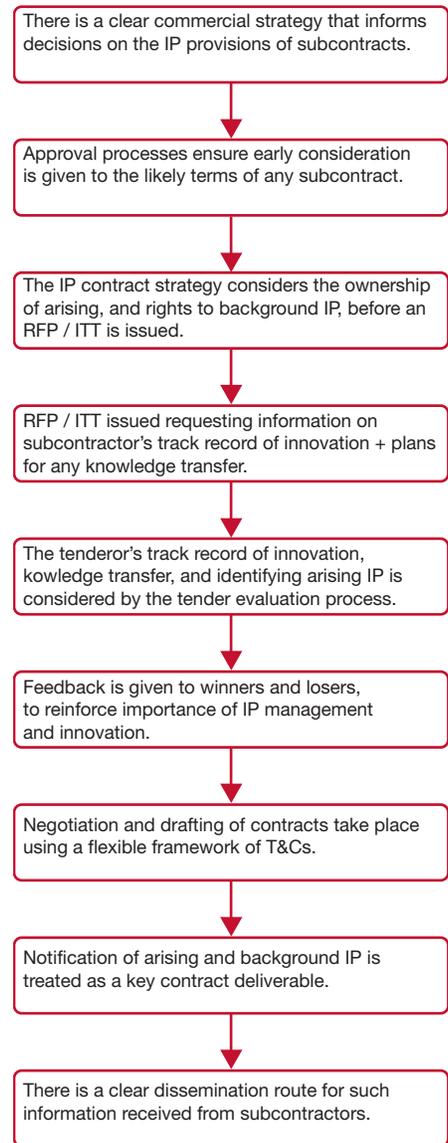
Encouraging innovation

Subcontractors must be financially incentivised to provide innovative solutions both within any proposal and during the performance of any contracts they have won. So, for example, it may be appropriate to share any savings that result from the introduction of technologies or ways of working not identified in the original proposal. Clearly, any associated risks will also need to be shared. It is also evident that one of the key rewards for any subcontractor is the prospect of winning further work. Its behaviour will therefore be positively influenced if bid evaluation criteria ensure that subcontractors are selected taking due regard of their ability to innovate, as demonstrated in previous work, and their past performance in sharing knowledge with their customer, as well as their track record of reporting arising IP.

The use of such criteria will encourage subcontractors both to innovate and to highlight where they have made innovations. This is especially important in instances where subcontractors could be aware of improvements that could be made to their customer’s working practices or technologies, but where these fall outside of the scope/obligations of their current contracts. Clearly a subcontractor is at liberty to make an unsolicited bid for new work in these circumstances, but the identified improvements may not lend themselves to such an action. Thus, it may make sense to provide a formal route or suggestion scheme to enable subcontractors to submit ideas which they do not expect to offer in future bids. Here their reward would be the ability to demonstrate and gain credit for such actions during the pursuit of subsequent unrelated work. However, the operation of these suggestion schemes must be formalised to ensure both sides’ rights and responsibilities are clearly defined.

It has already been emphasised that organisations should have a clear strategy, or decision-making rationale, defining the

IP and the procurement process



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circumstances under which IP rights should be ceded. Beyond this, it should be noted that the subcontract chain may also be in a strong position to improve or enhance the technologies and processes developed by their customer. A commercial strategy should consider and identify areas where technologies should be spun out into the subcontract chain in return for a licence fee and/or access to improvements, in the expectation that they will be improved and hence made available to future ITTs, or to aid in the development of an industry standard (which may increase competitive pressures and hence reduce costs).

Knowledge management initiatives

Knowledge management (KM) tools and processes can be used to extract value from the subcontract chain. Knowledge sharing events can be held with the subcontract chain, for example. These can then be used to share problems and new solutions, not only between the purchaser and subcontractors, but also between subcontractors. It is also possible to setup project-specific virtual environments, such as e-rooms, to enable more effective collaboration and ways of working with subcontractors.

Such initiatives clearly create IP issues and work will be needed to ensure each side's IP rights are clear. But these challenges may be worth facing if this will help establish a more technically innovative subcontract chain.

KM is not a new concept, and has numerous opponents and champions. Ultimately, while there are many organisations using KM tools that can justifiably claim to have established a learning culture, there are others that just pay lip-service to this vision. However, for many industries there are clear advantages in creating an environment where knowledge is shared with subcontractors.

Beyond the simple sharing of existing knowledge and expertise, it may be

appropriate to enter into various forms of collaboration. These can span a spectrum of initiatives such as: joint funding of key work streams, especially technology development; call-off-contracts that will encourage subcontractors to invest in certain areas; and restructurings in which capabilities, perhaps including personnel, are transferred into the subcontract chain.

The IP provisions of such collaborative agreements must again be driven by a commercial strategy, anchored in an understanding of the organisation's key enabling and differentiating capabilities.

Practical challenges

The above clearly requires an organisation to show flexibility when determining the IP provisions of the contracts it negotiates. This, in turn, implies a need for more than a single template set of IP terms and conditions. In practice, there will need to be a pick list of approved IP terms and conditions, and clear delegated authorities defining who is able to sanction the use of each type of clause.

Beyond the development of such a flexible framework of terms and conditions there are additional challenges; for example, procurement and legal personnel will need to have a high level of IP expertise. This is likely to require a training programme that not involves only lecture based instruction, but also on-the-job mentoring to ensure such guidance is being applied. It will also be necessary to develop systems to track IP rights – using a flexible system of IP terms and conditions will inevitably create a complex pattern of rights and responsibilities that must be tracked.

Looking at the latter point, it may be necessary to develop a database to:

- Enable rights to subcontractors' background IP to be recorded.
- Record the rights retained to any IP ceded to subcontractors.
- Record any royalties due on the exploitation of identified IP.

- Identify the demander for each agreement, so that they can be reminded of any ongoing events (eg, expiry of the agreement, time-limited options and so on).
- Enable agreements to be found using keyword searching and so on.

While providing IP training to procurement (and/or the legal function) is a prerequisite, to frame and inform an effective dialogue between the demander and procurement it may make sense to supplement the ubiquitous IP question used on service requisition/purchase orders – that is: “Will IP be created under the contract, or will ongoing rights need to be secured to existing subcontractor’s IP?”

A positive response to this simple trigger question can be used to ask a number of supplementary questions.

First, with regard to the subcontractor’s background IP and knowledge, these include:

- Could the results have application outside of this project and if so will such use require ongoing rights to the subcontractor’s background IP?
- Will access to specific subcontractor background know-how, data or documentation be required to facilitate this exploitation, and if so should such transfer be described in the contract?
- If the subcontractor were to grant wide rights to such background IP, could this prejudice its ability to win future work?
- Does exploitation require access to known third-party IP?

Second, turning to arising IP and knowledge, points to consider are:

- Should arising expertise and knowledge be transferred from the subcontractor during or on completion of the contract, and if so should these activities be described in the contract?
- Could the arising IP be used to enable the subcontractor or licensees to compete with the customer?
- Could there be future confusion or disagreement regarding what IP and knowledge assets were the subcontractor’s pre-existing property as opposed to assets created under the contract?
- Could the subcontractor improve any of the results of this work or generate revenue by applying them for other customers?
- Is the work sufficiently novel to make it difficult to identify all the applications of the results?

Finally, when it comes to documentation it is important to decide whether the contract should describe any drawings, calculations and data the subcontractor must deliver to enable subsequent work, repairs or copies of equipment to be made. On top of this, should commercially information be given to or generated by subcontractors?”

All these questions will in general need to be answered jointly by the demander and the lead contact in procurement/legal. Their purpose is to ensure the completeness and adequacy of any dialogue, and to indicate whether the contract negotiations and drafting will involve complexities that warrant them being handled by an IP specialist.

To ensure these issues are adequately considered, it may be appropriate to have a formal requirement to keep a record of the answers to these questions in the procurement file.

Flexibility and joined-up thinking

To extract maximum value from their subcontract chain, organisations will need to establish a flexible contractual and working relationship, in which a number of factors are considered.

There has to be joined-up decision-making between the commercial, technical and delivery areas; with projects and functions giving early consideration of any IP issues associated with contracts they will let.

There should be a clear commercial strategy identifying:

- The circumstances under which subcontractors will be allowed to retain IP they create.
- The decision-making rationale that should be followed when determining the rights that should be sought to subcontractor’s background IP.
- Where internally developed IP should be made available to the subcontract chain.

Subcontractors should be incentivised to identify and cooperate in the transfer of developed IP and knowledge. The procurement process should also give early warning of contracts that will need specialist IP input during their negotiation or drafting. Finally, a searchable database should be created that sets out the IP rights and obligations covered by contracts. This will provide agreement owners with automated reminders of key events/dates. **iam**

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