

Satellite procurement contract: checklist

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A checklist of points to include in a typical satellite procurement or construction contract.

The legal, regulatory and contractual aspects for the satellite sector are specialised, although general principles of commercial and competition law apply to satellite procurement and launch services contracts. Insurance is an important issue and this must be reflected in any commercial contracts.

Satellite procurement contracts resemble construction contracts more generally, such as for aircraft, and are usually made between a prospective satellite system operator, as purchaser, and a manufacturer, as supplier, for space segment and related Earth facilities. Contracts are either “turn-key” or bespoke. There are a reasonable number of manufacturers with the technical capability to deliver non-military satellites and increasingly more entering the market as manufacturers of small satellites (smallsats).

Given the degree of risk associated with the manufacture and launching of satellites, it is not uncommon for procurement, particularly for larger satellites, to be subject to lengthy tendering procedures.

This checklist outlines the clauses included in a typical satellite procurement contract (in addition to the usual standard boilerplate clauses).

Scope of work

The parties should agree on the work to be carried out, with detailed technical matters referred to in a technical schedule (often in response to any tender requirements).

Delivery schedule

The delivery schedule is a matter of importance to the purchaser given the strictness of timings for compliance with International Telecommunication Union (ITU) Radio Regulations in relation to:

- Spectrum filings.
- Bringing into use dates for spectrum assignments.

- The satellite launch schedule.
- Commercial plans.
- Customer requirements.

This is equally important to the manufacturer given that delays are not uncommon.

Particular provisions and milestones during construction phase

Progress reports assure the purchaser that the manufacturer is performing and also providing an opportunity to make modifications where necessary. See Changes and modification to satellite during construction.

Inspection and acceptance

Inspection and acceptance are crucial because, once launched into space, corrections to satellites are normally only possible to the extent that they can be performed through terrestrial control of the satellite. This may change to some extent with the advent of in-orbit servicing missions. For the manufacturer, these inspection procedures are also relevant to the payment milestones, and acceptance is one of the most critical payment milestones.

Acceptance, which is generally referred to as “Final Acceptance”, can occur either:

- Before a satellite is shipped for launch (at the premises of the manufacturer).
- At the launch site.
- At “intentional ignition”.
- In orbit.
- As may otherwise be agreed between the parties.

Correction of defects or anomalies

The correction of defects or anomalies clause covers defects in the manufacture of the satellite or its components that the manufacturer must correct at its expense, but it can also trigger modifications for various reasons. If the modification is:

- As a result of a defect or is otherwise necessary because of some act or omission by the manufacturer, then it is carried out at the manufacturer's expense.
- Requested by the purchaser, then it falls under changes and modification to the satellite during construction and is carried out at the purchaser's expense (see Changes and modification to satellite during construction).

Passing of risk and title

The purchaser needs to be confident that it receives good title to the satellite and requires a warranty to this effect. The time at which risk passes to the purchaser is usually the subject of detailed negotiations with the manufacturer. Risk can pass either:

- Before a satellite is shipped for launch (at the premises of the manufacturer).
- At the launch site.
- At "intentional ignition".
- In orbit.
- As may otherwise be agreed between the parties.

The time when risk passes has a bearing on the insurance that the purchaser obtains as part of its overall commercial arrangements.

Prices and payments

Prices and payments clauses are detailed provisions and can take the form of instalments during manufacture against agreed "milestones", which are either:

- A lump sum on acceptance.
- A combination of instalments during manufacture and "incentive payments" during the life of the satellite.

Incentive payments are attractive to purchasers as they allow for payment deferral. However, they can increase the satellite cost as the manufacturer also has to bear the risk of satellite performance over its projected lifetime, which may diminish through no fault of the manufacturer. Additionally, the agreed price should detail whether costs, such as for transportation of the satellite to the launch site or for storage and related insurance, are included or are additional.

In-orbit testing

The manufacturer has to undertake with the purchaser various tests to determine whether the satellite is performing according to the satellite specifications. Depending on the results of these tests, various consequences follow. If the satellite:

- Conforms, the purchaser makes appropriate payments.
- Does not conform, the manufacturer undertakes reviews to determine the reasons why the satellite is non-conforming and whether it is a total, constructive total or partial loss.

Depending on the outcome, various financial consequences follow (see Remedies) including insurance payments where applicable.

Insurance

Various risks are covered by insurance in the event of total loss, constructive total loss or partial loss. Therefore, in commercial negotiations, the parties determine the circumstances in which payments are made through insurance or through refund by the contractor (depending on the cause of, and therefore the liability for, any loss).

Force majeure and excusable delays

Force majeure terms are fairly standard but governmental action can be important, especially in a volatile political world where highly advanced technology is used for outwardly peaceful purposes but can have other uses. Excusable delays are a subject for commercial negotiation and relate to which party bears the risk.

Patent and data rights

Patent and data rights are fairly standard, with a purchaser wishing to use all relevant data and documentation supplied to operate the satellite. The manufacturer wants confidentiality and non-disclosure and may also need the ability to assign licences. There are normally provisions:

- With regard to infringement of intellectual property rights by either party.
- Relating to joint or purchaser-led intellectual property rights in any improvements.

Export licences and authorisations

Given the sensitive and dual-use nature of satellite technology, certain governmental export licences, particularly those of the US, may be necessary, and they are usually the responsibility of the manufacturer. Similarly, the manufacturer is generally responsible for obtaining and maintaining all regulatory and other governmental authorisations as may be necessary for it to fulfil its obligations under the satellite procurement contract.

Warranties

In addition to title, other fairly standard warranties are needed, including warranties that the satellite and related equipment are free from defects and conform to the relevant specifications, and that the manufacturer performs its duties with care and skill. The purchaser also has obligations to provide information, which its warrants is correct.

Liabilities and indemnities

Liabilities and indemnities are governed by national law. Therefore, a party cannot exclude liability for death or personal injury arising out of negligence. However, risk to personnel is relevant, especially at the launch site, and so it is usual for parties to have appropriate waivers and indemnities.

Key personnel and logistical support

Some of the manufacturer's personnel are key to the procurement and are identified as "key" with provision for agreed changes to those personnel. Support for the purchaser is also important, especially if it is its first satellite. Additionally, the manufacturer must provide facilities during inspection and may also need to obtain any necessary visas for the purchaser's staff.

Changes and modification to satellite during construction

Given the nature of satellite construction and technical developments over the long lead times during manufacture, it is important to be able to modify the contract through a reasonably flexible procedure.

Assignment

Assignment tends to be a standard clause, although both parties may want to control to whom a contract

may be assigned. This clause may be important to allow the raising of financing, whereby the rights of either party may be assigned to a financial institution.

Remedies

Remedies for breach depend on the nature of the breach. In most cases, the purchaser wants a satellite delivered, so the parties may rely on liquidated damages for breach. However, termination for breach may be appropriate where the breach is one not capable of monetary compensation. This may arise, for example, if delivery is likely to be so delayed that the purchaser:

- May not be able to launch the satellite in a feasible commercial timeframe with a satellite launch service provider.
- May be out of time to maintain its ITU filing for the relevant orbital position or frequency co-ordination.

The purchaser also needs remedies in cases where the manufacturer suffers a partial loss (as defined in the contract) or is unable to correct deficiencies or defects in the satellite. The manufacturer's remedies are normally limited to failure by the purchaser to meet its payment obligations.

Termination

Termination clauses are subject to detailed negotiation. Normally, termination is automatic in the event of insolvency or of fundamental breaches by either party. The contract may also allow termination for convenience by the purchaser with associated payments to the manufacturer. The manufacturer may also wish to have the right to take over the contract in the event of termination.

Options

In some cases, a purchaser may also negotiate options for one or more additional satellites, in which case the relevant terms are part of the contract, including the price for exercising the option.

Arbitration

Given the nature of satellite construction, parties need to have fast-track resolution of disputes procedures and also effective arbitration with access to experts to help resolve disputes.

Governing law

Governing law is sometimes one of the parties' jurisdictions, or a neutral one.

Satellite launch services contracts

If the parties are also negotiating a satellite launch services contract, it is essential that the two contracts are consistent with regard to delivery schedules, risk and insurance, and warranties and indemnities. For a checklist on the points to include in a launch agreement, see [Checklist, Satellite launch services contract](#).

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