



# IALA GUIDELINE

## G1005 CONTRACTING OUT AIDS TO NAVIGATION SERVICES

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Association Internationale de Signalisation Maritime



# DOCUMENT REVISION

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Revisions to this document are to be noted in the table prior to the issue of a revised document.

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# 1. INTRODUCTION

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For a number of decades, national authorities have utilized service providers for the delivery and maintenance of Aids to Navigation (AtoN) services. Contracting out can be performed in different degrees and mainly in the field of conventional AtoN (or traditional AtoN). Although the majority of AtoN services are done by national authorities that are governmental bodies, some of them have adopted fairly advanced forms of contracting out.

The purpose of this document is not to propose any preferential form of operation for the authority to undertake, but to identify the characteristics, advantages and disadvantages of different levels and types of contracting AtoN services.

In the process of contracting AtoN Services, several steps should be distinguished:

- Step 1: Assessing whether to outsource part of the service (section 3)
- Step 2: Selection of the service provider and the type of contract (section 4)
- Step 3: Contract management (section 5)

Every organisation considering contracting AtoN Services should have a clear understanding of what is to be achieved by delivering the service through alternative means as opposed to the current delivery mechanism. These are factors that will first justify transferring the service from the current delivery mechanism to an optional one, and later contribute to determining if the contracting out experience was successful.

Several objectives can be taken into consideration in the analysis of contracting AtoN services, for example:

- Quality of the service:
  - Service offered to mariners
  - Reliability and continuity of the service
  - Response to outages
  - AtoN in place at the right time
  - Physical proximity of service providers to clients
  - Flexibility and innovation from the service provider
  - Implementation of new technologies
- Risk Management
- Costs of the service:
  - Reduction of costs
  - Cost-effectiveness
  - Financial risk
  - Availability of cost recovery exercise



## 2. CONSIDERATION FOR CONTRACTING OUT AIDS TO NAVIGATION SERVICES

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### 2.1. CONSIDERATION - SOLAS (IMO)

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It is recognized that the responsibility towards the international community always remains with the Contracting Government as signatory of the SOLAS Convention, notwithstanding the type of organization. The accountability of the Government cannot be contracted out due to the fact that it provides aids to navigation as a signatory of the SOLAS Convention. (SOLAS Chapter V, Regulation 13 refers).

### 2.2. LEGAL MANDATE OF THE AUTHORITY

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In addition to the previous section, national authorities should pay particular attention to the legislation within their countries. Being the owner of the AtoN service or the official organization responsible to provide an AtoN service under legislations, the national authorities could be held liable to any third party injured as a result of negligence attributable to the service provider in the execution of the maintenance contract. Most often, the liability and the responsibility attributed to the national authorities cannot be passed to the service provider, even using a very detailed and solid contract.

### 2.3. RISK MANAGEMENT

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Any type of contracting out management should have a form of risk management within its process. IALA Guideline *G1018 Risk Management* should be considered by national authorities to identify, manage and mitigate risks associated with contracting out initiatives.

## 3. STEP 1: ASSESSING WHETHER TO OUTSOURCE PART OF THE SERVICE

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Each country and/or organization should develop and use its own internal or external procedures for advance in the decision of contracting AtoN services. The decision must not only consider technical or economical aspects but should also include the administrative, social, legal and service implications related to the decision. The following process has been extracted from the Canadian Coast Guard procedure [1] and can be used as a guide for fulfilling this step.

### 3.1. ASSESS OPPORTUNITIES

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To identify the services, systems, information, resources, processes, activities, tasks, etc. (hereafter “services”) that may benefit from being delivered in an alternate way, i.e., contracted out. At the end of this step, a brief list of services and the reasons why they were chosen should be produced.

### 3.2. DEFINE THE PERFORMANCE REQUIREMENTS

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To define client expectations, service standards and required outputs for a refined set of activities that are under consideration. This step will produce a concise statement of processes and activities and a set of related service standards and required outputs. It should be clearly stated what terms and conditions are important to delivering this service, i.e., availability, level of service, response time, etc. It is advisable to use the current service standard as the starting point for the review. It should also be kept in mind that highly specialized requirements will have the effect of severely limiting the number of future service providers.



### 3.3. BUILD THE TEAM AND PROJECT RESOURCES

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To build a team that would be able to make an informed and well considered recommendation supported by a strong case for a preferred delivery alternative.

### 3.4. DEVELOP THE COMMUNICATION PLAN

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To develop a plan for communicating to employees, unions (if applicable), clients, management, central agencies and other stakeholders the intentions of, process, progress and results of the alternative service delivery review.

### 3.5. CHOOSE THE ALTERNATIVES

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To identify a variety of service delivery alternatives or options that merit review and analysis.

### 3.6. CONSTRUCT THE ASSESSMENT FRAMEWORK

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To provide a simple, complete framework for assessing the feasibility of the alternative service delivery options arising from Step 1 (section 3.5). This step should consider the impacts of contracting out in the whole organization, which includes the following:

- Human resources/work force adjustment considering the knowledge base within the competent authority.  
Whatever solution is considered, a procedure has to be implemented to ensure the national authority expertise and contracting power. Adequate resources need to be allocated to manage contracting out and keeping personnel motivated.
- Internal resources:
  - Existing contractual agreements
  - Asset management
  - Revenues
- Clients and stakeholders:
  - Levels of service
  - Client expectations and satisfaction
  - User pay/user say
- Services policy and operations
- Public policies and governance:
  - Public policy requirements
  - Legal and regulatory framework
  - Long term risks

### 3.7. DO THE COST ANALYSIS

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To compare a chosen set of alternatives on the basis of revenues, costs, cost recovery and financial risks.



### **3.8. DO THE QUALITATIVE COMPARISON**

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To compare chosen alternatives on the basis of qualitative factors: strategic fit, client satisfaction, operational performance, risks and ease of implementation.

### **3.9. ASSESS POTENTIAL SERVICE PROVIDER CAPABILITIES**

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To compare alternatives on the basis of service provider capabilities, understanding that delivery options may be provided by a range of parties, including clients and private sector, public sector, etc. It should consider that, in some cases, the Government authority may be the service provider.

### **3.10. DEVELOP A RECOMMENDATION**

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To develop a well-considered, transparent recommendation of a preferred service delivery option.

### **3.11. VALIDATE THE RECOMMENDATION**

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To confirm the soundness and durability of the recommendation for preferred service delivery.

### **3.12. SEEK THE “GO-NO GO” DECISION**

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To obtain the advice and approval of senior management to proceed on with implementation of the recommended delivery option or how to improve your recommendation.

## **4. STEP 2: SELECTION OF THE SERVICE PROVIDER AND TYPE OF CONTRACT**

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### **4.1. SELECTION OF A SERVICE PROVIDER**

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The criteria for selection of successful service providers must be carefully considered and cover such issues as technical and managerial competency of service providers, their likely financial viability over the term of the contract and the adequacy of their quality and safety management.

### **4.2. TYPE OF CONTRACT**

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A fixed price contract with strict control from the national authority avoids a lot of discussions. If the objectives are clear and well defined the service provider has no excuses not fulfilling the objectives.

It is very difficult to control all aspects related to the good maintenance of an AtoN. It requires a lot of people from the side of the national authority and this is just the contrary to the basic idea of contracting a third company to do the job. Therefore, a good way of having effective results and not having permanent discussions is that all responsibility for the delivery of AtoN is on the side of the service provider, and the money paid in any way for the job is a fixed amount. In this case the control activities can be very specific and can be done with few very capable people. On the other side, the national authority knows in advance how much money is going to be spent.

The contract specifications could be performance based and have adequate performance measures that are objective and easily measured or observed. There should be rewards for good performance and penalties for inadequate performance.





While short term performance issues such as AtoN availability are relatively easy to measure, longer term issues relating to the overall material condition of AtoN infrastructure (electrical/mechanical systems, structures, buildings, etc.) are more difficult to measure and control in a performance-based contract. Specifically, for contract periods of three to five years with a service provider and cycles of five to twenty-five years for major works infrastructure, the condition of infrastructure at the start of any contract and those required at the end need to be clearly defined and understood by both the national authority and the service provider. Significant resources may be needed by the national authority to initially define infrastructure condition at the start of a contract.

A balance should be achieved related to risks. If the contracting government agency retains all the risk, the service provider can be in a position of being rewarded for poor performance, however contracting out all the risk can lead service providers to build large risk premiums in their contract prices.

### **4.3. CLAUSES OF THE CONTRACT**

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#### **4.3.1. OBJECT OF THE CONTRACT**

The object of the contract should be very well specified and should consist of operational targets and service level measures. All future daily work planning should remain in the service provider side, although some outsourcing models may actually involve the client scheduling the work. The national authority should pay particular attention when scheduling the work because interfering the schedule of service providers may mean that other services would not be completed as effectively as possible.

#### **4.3.2. EXTENT OF THE WORK**

The extent of the contract is a very important point. The number of AtoN and the extent of the area to be attended by the service provider should have a minimum size. This is related to the number of buoy tenders that should own the service provider. Minimum number is one buoy tender, but to cope with time for repairs, classification and other non-working time it is very convenient that the work could justify more than one buoy tender. When the work does not require one full buoy tender it is not easy to find additional work for this ship resulting in potentially higher costs for the service. The same applies to the number of AtoN. There is a minimum number that justifies having enough spare parts for everything and competent people in the yard.

#### **4.3.3. DURATION OF THE CONTRACT**

There are many factors that may affect the duration of the contract such as people, ships, material and legislations. The duration of the contract can usually justify the investment in better equipment for the AtoN. For service providers, it is easier to amortize investment in superior aids equipment over a longer period of time while considering environmental factors. Service providers may increase their costs for a shorter contract.

For the evaluation of the maintenance costs, it should be taken into consideration that meteorological conditions are not the same year after year. The cost evaluation for shorter contract implies that worse conditions are always considered which turns into higher costs. With longer contracts, bad years are compensated with good ones.

The length of the contract must be carefully considered; if it is too short, it will discourage some service providers from tendering due to high set up and tendering costs, which must be amortized over the life of the contract. Longer contracts may not result in full advantage of the competitive tendering process.

#### **4.3.4. BUOY TENDERS**

The provision of buoy tenders can be undertaken by the service provider or by the national authority. In many cases, it can be very interesting and convenient to find a formula for letting the service provider use the buoy tenders of the national authority. Of course, the service provider should have the obligation of keeping the buoy tenders in good condition and under class and the national authority should have a good control schedule of the conditions of the ships. The contract should specify that buoy tenders should not be used in other activities out of the AtoN service without the written permission of the national authority. A clause should be added in the contract that if buoy tenders are not used to fulfil the contract, they should be returned to the national authority. This



solution can save a lot of money for the service provider and for the national authority since it is not easy to find appropriate ships for this type of work.

#### **4.3.5. PERSONNEL**

The contract should specify core skills and competencies required by the personnel of the service provider.

Personnel can be divided into four sectors:

- 1 Mariners and technical staff on buoy tenders
- 2 Technical people at the yard
- 3 Technical people in the office
- 4 Managerial sectors

In general, it is possible to include a condition in terms of reference (ToR) for the number of people from sectors 1 and 2 and a minimum quantity from sector 3. People from sectors 3 and 4 are necessary for the management of the contract. Personnel from sectors 1 and 2 sometimes come from national authorities.

#### **4.3.6. TECHNICAL SPECIFICATIONS**

In normal circumstances, AtoN systems are passed to the service provider in good condition. The introduction of more effective equipment, providing at least the same level of service to the mariners and/or offering lower life cycle costs can be made by national authorities or the service providers. This should be defined within the contract.

#### **4.3.7. PERFORMANCE INCENTIVES**

The contract should specify mandatory and minimum performance criteria. Performance in excess can be rewarded with incentives. The required level of service should be established in accordance with the needs of the mariners supported by national authorities. Higher levels of service are always obtainable but involve higher costs. Penalties should be applied in case of not fulfilling the standards agreed upon in the contract.

## **5. STEP 3: CONTRACT MANAGEMENT**

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Well-managed contracts can successfully deliver AtoN Services. Following are the main phases of contract management to consider when performing contracting out activities.

### **5.1. TRANSITION PHASE**

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This phase of contract management, the transition period, commences from the time the service provider is selected and up to the complete hand over of the full scope of the contractual agreement. A strategy for smooth transition from the old arrangements to the new one should be developed. The objectives of the transition phase include elements such as:

- The establishment of a strategy to manage the transition to contracted service delivery.
- The minimization of the chances of a loss of service delivery.
- The mitigation of the impact on clients and other stakeholders, including internal employees.



## 5.2. ON-GOING MANAGEMENT

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National authorities should implement action items for the inspection, monitoring and the auditing of the delivery of the service by the service provider. Effective management requires:

- Sound planning and risk assessment
- The allocation of adequate resources
- A proactive approach supported by clear procedures
- Regular monitoring
- A comprehensive reporting and analysis to measure achievement against the stated objectives

## 5.3. PERFORMANCE OF THE SERVICE

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The contract should specify in detail the performance of the AtoN service to be delivered to the mariners under the responsibility of the service provider. IALA Recommendation *R0130 Categorization and Availability Objectives for Short Range AtoN (O-130)* [4], as well any other relevant IALA documents, should be used to define the performance. The level of service should be determined by the national authority.

## 5.4. NOTICES TO MARINERS PROCESS

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The Notice to Mariners process is the method employed by national authorities to inform mariners of malfunctioning AtoN. The contract should specify that the service provider must use this process to inform mariners of any outages of the aids to navigation under its contractual agreement.

## 5.5. FLEXIBILITY OF THE CONTRACT

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The contract should be flexible enough to ensure special or unplanned requirements of the national authorities. This could include, but not limited to:

- Emergency wreck marking
- Marking of new dangers and obstacles
- Buoyage changes due to modifications of the waterway/fairway
- Response to outages or aids discrepancies
- Other unplanned requirements

The contract should describe the procedures on how the national authority can order actions from the service provider and the time of reaction to fulfil these requirements.

## 5.6. INSURANCE REQUIREMENTS FOR THE SERVICE PROVIDER, PUBLIC LIABILITY

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The national authority should define the appropriate insurance coverage to be maintained by the service provider. The national authority could be held liable to any third party injured as a result of negligence attributable to the service provider in the execution of the contract. This also applies when the liability and the responsibility attributed to the national authorities under legislation cannot be passed to the service provider, even using a very detailed and solid contract. Safeguards, such as the “save harmless” clause and the requirement to hold liability insurance, could be included in the contract. The decision not to demand these safeguards must be taken into consideration when conducting a risk management analysis. Another way to reduce the likelihood of the national authority being



held liable is to inspect the work performed by its service provider, in accordance with the description of the work as stated in the contract, by having the service provider submit maintenance reports to the national authority. Lastly, the scope and frequency of inspection of the service provider's work are criteria that should be considered in the risk management process. This inspection could be conducted through a statistically random control mechanism based on the knowledge and experience of the service provider.

## **5.7. CONTRACT SUCCESSION – TERMINATION OF CONTRACT AND CONTINUATION OF SERVICE**

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This phase of contract management lifecycle looks at ensuring a smooth succession phase at the end of the contract period to ensure minimal impact on the business of the national authority. The objectives of this phase are to ensure that there is a smooth, efficient and effective transition at the end of the contract for either an extension of the existing contract with any revised service levels, for selection of a new provider or for returning the services to in-house provision.

## **6. POTENTIAL ADVANTAGES AND DISADVANTAGES OF CONTRACTING OUT AIDS TO NAVIGATION SERVICES**

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There are many potential advantages to contracting out aids to navigation services. In addition, it is important to take into account the disadvantages prior to entering into any contract.

### **6.1. ADVANTAGES**

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- Contracting aids services may be more cost effective, with better financial control, and more flexibility in use of resources and staff motivation.
- It may be politically more acceptable than having governmental agencies provide services directly.
- Contracting aids services may relieve national authority of capital investment and infrastructure expenditure.
- It may reduce the number of national authority employees.
- Service providers may be more innovative and faster to implement changes in operational and practical matters.
- Local service providers can usually respond faster to outages therefore providing a better and more reliable service to the mariners.

### **6.2. DISADVANTAGES**

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- There may be some ambiguity of responsibilities between national authority and service providers.
- It may be difficult for national authorities to retain sufficient expertise over time to adequately monitor service provider performance.
- Service providers may gain a strong position in price negotiation for emergency work or contract renewal once national authorities lose their resources to do the work internally.
- In some cases, the combined cost of contract provision of the service and adequate monitoring of service provider performance may not be as cost effective as retaining the function in-house.



- It may not be possible to reduce staff resources simultaneously with contracting out therefore compromising potential savings.
- In case of changing service provider, continuity of service can be affected and increase costs.
- There may be a potential private monopoly situation created.
- There could be potential demotivation of internal staff.
- Quality of service may be adversely affected.
- Contract terms may not be conducive to optimising long term investment in AtoN infrastructure.

## 7. CONCLUSIONS

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A change within the delivery of a public AtoN service involves technical, economic, social and political decisions. This process is usually long and should be performed very carefully to avoid unnecessary consequences. The subject is very much dependent on local geographical conditions, applicable laws and regulations and general political strategy.

## 8. DEFINITIONS

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The definitions of terms used in this Guideline can be found in the *International Dictionary of Marine Aids to Navigation* (IALA dictionary) at <http://www.iala-aism.org/wiki/dictionary> and were checked as correct at the time of going to print. Where conflict arises, the IALA Dictionary should be considered as the authoritative source of definitions used in IALA documents.

Specifically:

- Administrations  
The administration authorized to regulate, administer and/or provide the Aids to Navigation service.
- Responsible party  
The entity with the responsibility to establish aids to navigation. This may be the administration or other parties.
- The service provider  
The entity which provides the aids to navigation service on behalf of the administration, also known as external service provider.
- Contracting aids to navigation services  
Any contract between the authority responsible for the AtoN system and the private sector for doing tasks on AtoN under the responsibility of the authority. Contracting out can be one option exercised by a responsible authority as a means of delivering all or a portion of their services, however there are variety of options ranging from the authority continuing to carry out all the work using its own resources to fully privatizing service delivery. There are other possible arrangements such as partnerships and alliances with private organizations, formation of wholly or partly owned companies within an agency and the possibility of contracting in additional work of similar nature to, or compatible with an agency core business.
- Servicing  
The word “servicing” is used in a broad sense and includes some or all of the following tasks:



- Monitoring and/or checking of the aids for proper operation, characteristic and position.
- Replacement of components (e.g., lamps, lenses, moorings, etc.).
- Positioning buoys on station and lifting or moving them as required.
- Maintenance  
Maintenance means the repair and painting of the fixed and/or floating aids included in the contract.
- Design and planning of the AtoN system  
The design and planning of the AtoN system is usually performed by selecting and positioning the right type of AtoN in accordance with the environmental factors to the waterways and in relation with the needs from the mariners.

## 9. ABBREVIATIONS

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ANAO	Australian National Audit Office
AtoN	Marine Aid(s) to Navigation
DFO	Department of Fisheries and Oceans (Canada)
IMO	International Maritime Organization
ToR	Terms of reference

## 10. REFERENCES

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- [1] Department of Fisheries and Oceans Canada (DFO). (1999) Guide for considering Alternate Service Delivery
- [2] Canadian Coastguard. (2003) Service Innovation in the Canadian Coast Guard – Service Delivery Option Analysis Tool
- [3] The Australian National Audit Office(ANAO). Better Practice Guide on Contract Management.
- [4] IALA. Recommendation R0130 (0-130) Categorization and Availability Objectives for Short Range Aids to Navigation