

IALA GUIDELINE G1077



IALA Guideline G01077 gives guidance on the maintenance of AtoN and information to help develop an adequate maintenance strategy. Maintenance is a key factor to ensure that Aids to Navigation equipment performs and is available in any given moment, according to the levels required to a safe and efficient navigation.

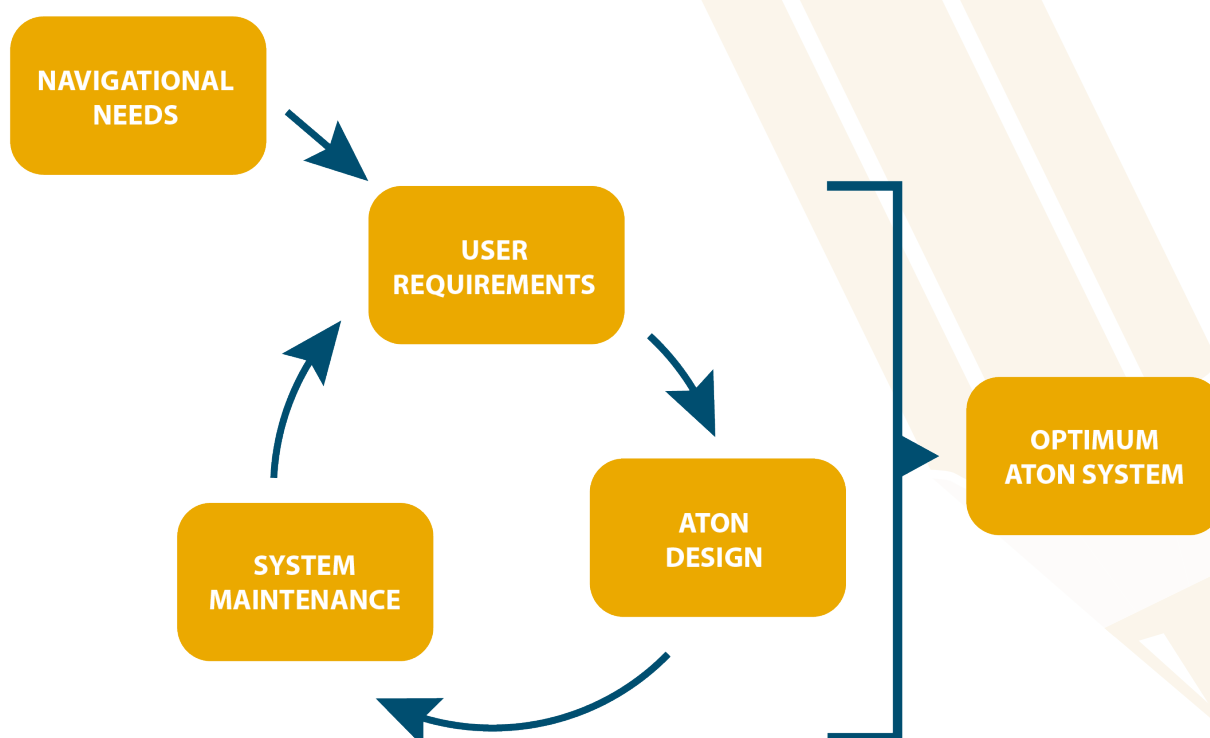
This maintenance strategy depends in high measure of the availability objectives established for each AtoN unit, that is defined based on the criticality and category of the AtoN.

GUIDING PRINCIPLES FOR MAINTENANCE STRATEGY

AtoN service delivery is composed by:

- User requirements**
- System design**
- System maintenance**

This article and the 1077 Guideline are intended to address maintenance, however there is a strong interrelation of maintenance with requirements and design. Equal importance must be placed in each of the 3 phases of the Aids to Navigation delivery to provide a signal to the mariner at an acceptable cost to the Authority.



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In the two first parts of this series we will explore and explain guiding principles to assist the overall Aton maintenance strategy, then, on the last article we will present the different types of maintenance strategies that can be adapted to these principles.

PRINCIPLE 1: MINIMISE THE COST OF OWNERSHIP

Maintenance strategies should always be focused on reducing the total cost of ownership.

The most common reason for a high cost of ownership in Aids to Navigation is to design a system based solely on the cost of acquisition, choosing low cost equipment that requires higher levels of maintenance and early substitution. Any costs saved in the initial acquisition phase will be lost if the system is expensive or difficult to maintain or has low reliability over the long term. Additionally, increasing the overall reliability of a system can provide significant savings in terms of necessary personnel, logistics, equipment, spare parts, and facilities.



Other factors that can reduce the total cost of ownership are as follows:

- *AtoN new technologies.*
- *Select suitable equipment to each application and environment.*
- *Extending maintenance intervals when possible.*
- *Use of electronic AtoN, mixed with traditional ones.*
- *Optimizing use of in-house or contract maintenance services.*

Les derniers progrès technologiques en matière d'aides à la navigation, comme les bouées en élastomère, peuvent réduire considérablement les coûts liés à l'entretien.