

Objective: Maintain the Trident warhead in service

Our strategy is to employ a balanced approach of science and manufacturing to ensure we meet the customer's need to provide and underwrite the warhead stockpile for life, performance and safety.

Corporate Measure:

There are several key aspects of our ability to meet this objective which will require detailed performance measures in their own right. However, corporately we will measure our overall success by the number of warheads available to the customer, defined in accordance with an agreed formula.

Strategies to achieve our objectives

Trident entered service in 1994 following a successful design and development phase and now provides Britain's "credible and effective minimum nuclear deterrent". Our warhead surveillance programme provides information which will be used, together with the essential knowledge and methodologies produced as part of our national warhead capability programme, to provide the on-going assurance of the safety and performance of the deterrent. This capability work includes a detailed characterisation and fundamental understanding of the effects of ageing on materials and components throughout the warhead life cycle.

Historically all weapon systems have remained in service for longer than the originally defined service life. In addition there are pressures to lengthen the life between refurbishments. This will require us to define and execute a warhead life extension programme. We expect to begin a refurbishment and recertification programme, in association with "trickle production" of selected components, to meet the service life requirement in the near future because:

- many components in the warhead have a limited life and some much shorter than others. Plans are already in place to exchange some components on a limited-life basis
- the properties of some other materials in the warhead change with age on about the same timescale
- waiting to find a problem in surveillance is unacceptable - we have to be able to predict the possibility of them well in advance so action can be taken to maintain the stockpile quantities required by Government. This is why we supply an annual stockpile certification statement to the customer