PathMaster
Master your journey into the future of mine countermeasures

The unmanned future awaits…
What are you waiting for?
At your side
to define and deliver
your navy’s future solution

Mines are proliferating...
and traditional minehunting is evolving
Mines are increasingly cheap, sophisticated - and deadly. And mine countermeasures are evolving rapidly to meet the threat. Today’s navies don’t want tomorrow’s solutions to be expensive and unsustainable: they want them to be smart and flexible. Unmanned systems offer that flexibility and can meet the needs of the future - from scheduled hydrographic surveys to clearing a choke point in a crisis.

The new unmanned world - compelling but complex
Unmanned MCM is now a reality. The gains are compelling: safer personnel, faster response, better detection - and better value. Some navies are already well into their unmanned journey. But it’s a major step and every navy’s needs are specific. How do you map an ever-changing set of unmanned options to your navy’s specific requirements? And how do you invest with confidence when the integration of new solutions with each other - and your fleet - seems complex and high risk?

Your journey - taken your way
Whether you’re considering a fully unmanned solution controlled from shore, a ‘system of systems’ launched from a mothership, or a hybrid of conventional and standoff, Thales can help you work it out.

Technical excellence backed by sea-proven experience and a dedicated research centre
Thales’s experts don’t just develop ‘theoretical’ systems: they rigorously prove them at sea in exacting trials - across a wide range of operational vignettes and sea states. Thales is committed to pushing the frontiers of unmanned MCM. It is investing strongly in areas like Big Data Analytics, AI and Connectivity: in partnership with ECA, L3Harris, Wood & Douglas, and SAAB, it is delivering the French and British navies’ groundbreaking MMCM solution; and its dedicated Maritime Autonomy Centre is creating tomorrow’s best of breed solutions with a growing ecosystem of marine-tech leaders.

Master your navy’s unmanned transition
Work with Thales to clarify your needs, understand your options and deliver your solution

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› Thales is working hard to simplify the unmanned journey - so that you won’t need to
Your journey to unmanned MCM needn’t be a risky headache. Thales has over 50 years’ mine countermeasures experience and today supports half the world’s accessible market in minehunting (about 300 systems). In the last decade, Thales engineers have turned their expertise to understanding and developing assured, unmanned ‘systems of systems’.

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1. Clarify your needs

Thales can work with you to:

- Model your operations to advise the options that will deliver maximum value and capability
- Test your solution against specific scenarios
- Design for a wide range of environmental conditions up to Sea State 4
- Deliver your solution ready for rapid transport and use anywhere in the world – stand alone or in a task force
- Configure your solution for safe and secure C2 and real-time sonar analysis - enabling safer and faster operations

2. Understand your options

- **Systems**
  - Thales’s strength is ‘system of systems’ integration. It isn’t tied to any one supplier - maintaining the flexibility to tailor exactly the solution you need.
  - **MiMap**
    - Achieve more in less time
  - **Autonomy Engine**
    - Proven algorithms and behaviours
  - **Endurance Management**
    - Maximise vehicle effectiveness
  - **Total Data Management**
    - Share, learn and improve

- **Integration**
  - Whether you want a proven Thales solution (like the Franco-British MMCM), prefer to integrate your chosen tools into a wider standoff system, or need a Thales sub-system to enhance your existing unmanned assets
  - **POC**
    - Control operations from anywhere. Secure communications
  - **USV/MOAS**
    - Certified operational agility and performance
  - **TSAM**
    - Detect and classify in real time
  - **SWEEP**
    - Combined influence: sweeping and jamming
  - **AUV**
    - Conduct covert surveys
  - **ROV/EMDS**
    - Safe, secure disposal of threats

- **Solution**
  - Your move to unmanned doesn’t have to involve high capital investment or costly in-house teams. PathMaster also includes a range of services to enable you to enhance your navy’s unmanned capability, without the hassle. From on-demand maintenance to full readiness and operation of your systems - Thales can tailor a solution that meets your needs.
  - **MiPath**
    - Detect • Classify • Locate • Identify • Neutralise • Sweep
  - **MiService**
    - Understand • Survey • Sustain • Share

3. Build your capacity

Today, Thales has distilled years of innovation, experience, and testing into a single offering – Pathmaster.

- It is a complete package designed to help you cut through the complexity of unmanned mine warfare, clarify your exact needs, and then work in partnership with you to design and deliver a solution that meets them – and your budget.
- We help you understand the full range of unmanned tools, model your specific operational vignettes to identify the best options, and deliver a safe and fully assured solution whether it is ownership or service based.
- For organic or hybrid configurations, Thales is the world-leading supplier of hull-mounted and variable-depth MCM sonar systems. These can be deployed independently or teamed with unmanned assets as a force multiplier, as you take your journey from conventional, through hybrid, to full standoff.
Design and deliver your solution...

You benefit from thousands of hours of development and at-sea test work.

Thales designs and delivers your preferred configuration, working in partnership with you.

Your ‘system of systems’ will be integrated using Thales’s safe and secure systems approach.

Solutions are qualified and certified - so you can operate legally, confidently, and capably.

Command and Control (C2) is cybersecure - protecting your personnel and investments.

... equip your fleet with tomorrow’s technology, today

INTEGRATED
- Fully unmanned or hybrid
- Detect, classify, localise and neutralise
- System of systems engineering
- Plug and play
- Future flexible architecture

SECURE
- Information assurance
- Cyber protected
- TEMPEST certified
- Real-time encryption

SAFE
- The assurance of certification
- Regulation compliant
- Best-practice designs
- At-sea munitions release

QUALIFIED
- Qualified multirole LARS
- Qualified unmanned vehicles
- Proven against your operational scenarios
- Certified munitions

Let’s talk...
Contact Thales for an informal discussion on your mine countermeasures needs.