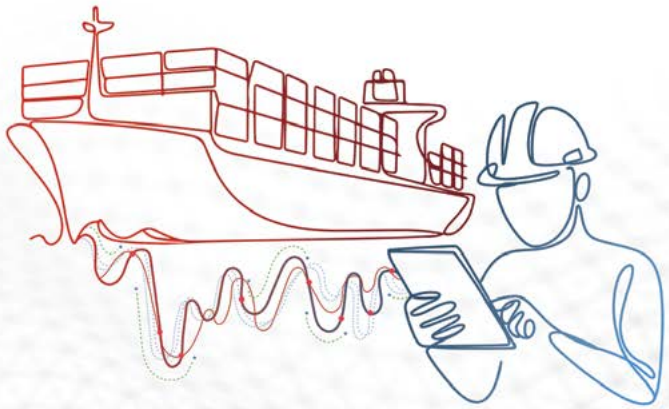


Data-Enabled Verification (DEV): Frequently Asked Questions

1. What is Data-Enabled Verification (DEV)?

DEV is the ABS framework for using accepted digital evidence and Data-Enabled Verification Techniques (DEVTs) to support survey preparation and, where permitted, full or partial crediting of Applicable Survey Tasks.

2. What is a DEVT?

A DEVT is a technology, method, or process accepted by ABS to produce, collect, manage, present or analyze evidence for DEV.

3. What kinds of activities can DEV support?

DEV may be applied, within the scope accepted by ABS, to vessels, offshore units, manufacturers, facilities and Recognized Service Suppliers. Applications include Survey After Construction, new construction, equipment and material manufacturer surveys, ISM/ISPS/MLC and other audits, and any additional activities accepted by ABS.

4. Does DEV replace all physical attendance?

Not automatically. DEV may support review before attendance and, where permitted by the applicable Rules and the accepted Crediting Path, may support crediting for an accepted scope without physical attendance. Other items may require onboard verification or physical attendance. DEV does not reduce the required level of verification.

5. Can DEV be used for statutory surveys or statutory verification?

Yes, but statutory credit may be assigned only to the extent accepted by the flag Administration.

Where statutory authorization has not been granted, DEV may still support Advance Review for the statutory scope.

6. What are the possible DEV outcomes?

ABS identifies four DEV outcomes:

- No Credit / Physical Attendance — the evidence does not satisfy the acceptance criteria, or attendance is required.
- Advance Review — the evidence supports survey preparation before physical attendance.
- Onshore Crediting — ABS assigns credit based on satisfactory DEV evidence where attendance is not required.
- Onboard Crediting — DEV supports preparation or partial verification, with credit assigned after completion of the accepted onboard scope.

7. What is Advance Review?

Advance Review is a preparatory review of submitted records, certificates, maintenance history, operational data, trends, parameters, alarm histories, or other evidence before physical attendance. It identifies what the evidence supports and the Remaining Scope requiring further verification. Advance Review does not, by itself, assign survey credit.

8. What evidence can clients submit under DEV?

The applicable authorization pathway depends on the DEVT and Applicable Survey Task.

Examples include:

- **Surveyor-Accepted:** photographs and recorded video, livestreaming video, and reports, records and documents within their defined scope.
- **Pre-Authorized:** Smart Function Health Reports, Smart Shipyard Technologies, PMP-Based Evidence, and DEV applications accepted for recurring use within their approved scope.
- **Case-by-Case Evaluation:** Point Cloud/LiDAR/3D Capture, Operational Parameter-Based Machinery Assessment (OPMA), Modeling & Simulation, Alternative Techniques, and uses outside an established authorization basis.

9. What is OPMA?

OPMA is a Case-by-Case DEVT that uses operational data or Structured Test Evidence from an approved Digital Survey Verification Platform to support Advance Review before Surveyor attendance. OPMA may support accepted Annual Machinery Survey scopes and, where applicable, Annual Automation Survey scopes. OPMA supports Advance Review only; it does not independently assign survey credit or reduce the required physical verification.

10. Does approval of an OPMA platform automatically approve its use on a vessel?

No. Acceptance of a Digital Survey Verification Platform does not constitute acceptance of a vessel-specific deployment. The vessel-specific scope and deployment are to be accepted for the defined OPMA application, and the platform is to be implemented through an ABS Recognized Service Supplier.

11. What are the minimum expectations for photo and video evidence?

Photo and video evidence must show the specific survey item and the condition or feature to be verified, be free from distortion or obstruction, include scale, orientation, and identifying context where needed, and provide enough coverage to demonstrate compliance. Minimum baseline specifications include:

- **Photos:** 1080p
- **Recorded video:** 1080p, 30 fps
- **Livestreaming video:** 1080p, maximum 0.5-second latency

ABS may require higher performance where necessary for the Applicable Survey Task, environmental conditions, or acceptance criteria.

12. Can livestreaming be used?

Yes, where accepted. Livestreaming may be used when the Surveyor needs to direct the examination in real time. It must support two-way voice communication, Surveyor-directed viewing, and appropriate record capture. If the livestream is interrupted, the incomplete scope must be completed through supplementary evidence or attendance.

13. What is a Digital Evidence Package (DEP)?

The DEP is the controlled set of information that defines a DEV application. It typically identifies:

- The applicable survey task
- The DEVT(s)
- Authorization level
- The evidence and its source
- Acceptance criteria
- Crediting path
- Known limits and approval conditions
- Any scope requiring attendance
- Statutory authorization, if applicable

14. What makes submitted evidence acceptable?

Submitted evidence must be accurate, complete, traceable and representative of actual conditions. It must provide the quality, detail, context, date/time, location and source needed to apply the acceptance criteria. Known defects, abnormal conditions, missing data, maintenance and configuration changes must be identified. Selective submission of favorable evidence is not permitted.

15. What if evidence has been edited, processed, or compressed?

If evidence has been edited, filtered, compressed, or otherwise processed, the submission must identify the processing, its purpose, and the location of the original evidence. Processing must not remove or change any condition that affects the conclusion. Source evidence must remain available to ABS when a summary or processed output is submitted.

16. What happens if the evidence is incomplete or does not support credit?

ABS may require supplementary evidence, another accepted method, or physical attendance. Any portion of the verification scope not satisfied through DEV evidence is Remaining Scope.

17. Does DEV change survey due dates or intervals?

No. Applicable Rules, due dates, survey windows, and attendance requirements remain in force. DEV does not alter survey intervals or extend due dates.

18. What is a Crediting Path?

The Crediting Path is the agreed verification route for a DEV application. It identifies the intended verification method, limitations, Remaining Scope, and the maximum crediting outcome that may be assigned subject to satisfactory evidence. A Crediting Path is not a guarantee that credit will be assigned.

19. Can ABS decline or limit the use of DEV?

Yes. ABS may decline or limit DEV based on the performance history of the vessel, unit, facility, or company (including port State control interventions, detentions, and outstanding non-conformities) or on the condition and compliance status of the subject under survey.

20. Can new or alternative technologies be used?

Potentially. If a proposed DEVT is not addressed by the DEV Requirements, or an addressed DEVT is proposed outside its stated scope, the application is subject to Case-by-Case Evaluation. Where applicable, the Alternative Means provisions of the ABS Rules for Survey After Construction also apply.

21. Can drones, ROVs, robots or other Remote Inspection Techniques be used?

Potentially. A Remote Inspection Technique (RIT) combines a platform, payload and data processing to provide remote access to areas for inspection. RIT is a means of collecting evidence, not a separate evidence type. Crediting depends on the evidence captured, the Applicable Survey Task, the applicable Rules and the accepted scope. When used for crediting under the DEV Requirements, RITs are to be operated by an ABS Recognized Service Supplier.

22. Who makes the final crediting decision?

The ABS Surveyor is responsible for the crediting decision. Credit is assigned only to the scope demonstrated by the evidence and permitted by the Crediting Path. For Onboard Crediting, the attending Surveyor evaluates the combined DEV evidence and onboard findings before assigning credit.

23. How do you get started with DEV?

Start with the Applicable Survey Task rather than the technology. Contact ABS to discuss the proposed scope, DEVT, available evidence, existing approval basis, statutory status and intended Crediting Path before relying on the evidence for survey credit.

For more information on DEV, visit **www.eagle.org/DEV**