

DAILY ENGLISH READING

12 August 2026 · 30-minute active reading pack for Davin

TODAY'S QUESTION

What would a trustworthy AI-generated TFL pipeline have to prove?

WHY SELECTED

CDISC's current AI Innovation Challenge includes a dedicated TFL-generation use case, but the strongest requirement is not generation itself. The workflow must preserve end-to-end traceability, standards integration, reproducibility and human-review controls.

Difficulty: C1 · TFL automation + CDISC + ARS + traceability

READING ORDER · 30 MINUTES

Min	Task	Focus
0-3	Preview	Define what end-to-end TFL traceability should contain.
3-13	CDISC Challenge	Read the 2026 use cases and judging criteria.
13-20	Traceability	Follow the semantic chain across standards and artifacts.
20-25	ARS	Understand machine-readable analysis metadata and results.
25-30	Output	Design one traceable AI-assisted TFL workflow.

SOURCES · OPEN ACCESS

MAIN · CDISC AI INNOVATION CHALLENGE 2026

Current status: submissions closed 31 July; judging in August.

[Open source](#)

SUPPORT 1 · CDISC · 9 JUN 2026

Closing the Loop: Automated Semantic Traceability from Study Design to Analysis

[Open webinar page](#)

SUPPORT 2 · CDISC OPEN SOURCE

Analysis Results Standard (ARS)

[Open project](#)

BRIEF BACKGROUND

The 2026 challenge includes synthetic SDTM/ADaM generation, AI-generated SAP content and AI-driven TFL generation. The TFL use case asks for traceability from objective through analysis to final output.

The judging framework assigns 40% to standards integration, traceability and impact; innovation and technical feasibility each receive 30%. Reproducibility, edge-case handling, documentation, validation and human-in-the-loop support are explicit evaluation considerations.

CDISC's semantic-traceability work links analyses back to source definitions across digital protocol and downstream standards. Previous challenge work connected protocol, CRF, SDTM, ADaM and TFL artifacts in lineage graphs.

ARS moves analysis results away from isolated static displays toward machine-readable definitions and results that can support automation, reuse and reproducibility.

For SP work, a useful chain is: objective -> endpoint -> analysis definition -> population -> ADaM -> executable analysis -> result data -> rendered TFL.

KEY VOCABULARY

Term	中文	Meaning / use
end-to-end traceability	端到端可追溯性	A continuous, inspectable link from study intent through data and analysis to the final result.
lineage graph	血缘关系图 / 数据谱系图	A graph showing how artifacts, variables, analyses and results depend on one another.
machine-readable	机器可读的	Represented in a structured form that software can interpret directly.
analysis metadata	分析元数据	Structured definitions describing analyses, populations, methods, inputs and outputs.
provenance	来源与演变记录	Evidence showing where a value, rule or result came from and how it was produced.
conformance	符合性	Whether an artifact follows a defined standard or executable rule set.
objective-to-result chain	目标到结果链路	The trace from study objective to endpoint, analysis and reported result.
dependency query	依赖关系查询	A query asking which downstream artifacts depend on a given source element.
impact analysis	影响分析	Assessment of what must change when an upstream definition or artifact changes.
reproducibility	可复现性	The ability to regenerate the same result from controlled inputs and methods.
interoperability	互操作性	The ability of different systems to exchange and use structured information consistently.
human-in-the-loop	人在回路	A workflow in which human review remains part of the decision or approval process.
edge case	边界情况	An unusual but valid situation that tests whether automation is robust.
static result	静态结果	A fixed output such as a PDF table that carries little reusable machine-readable structure.
analysis results standard	分析结果标准	A structured CDISC approach for representing analyses and results as reusable data and metadata.

USEFUL PHRASES

1. trace the result back to its source definition

A reviewer should be able to trace the result back to its source definition.

2. preserve a machine-readable chain of evidence

The workflow preserves a machine-readable chain of evidence.

3. separate content generation from conformance checking

The architecture separates content generation from conformance checking.

4. link objectives, endpoints, analyses and outputs

The metadata layer links objectives, endpoints, analyses and outputs.

5. support dependency queries and impact analysis

A lineage graph can support dependency queries and impact analysis.

6. make assumptions explicit rather than implicit

The system should make assumptions explicit rather than implicit.

7. regenerate outputs from versioned inputs

Teams should be able to regenerate outputs from versioned inputs.

8. treat traceability as a design requirement

Traceability should be treated as a design requirement, not an afterthought.

9. validate edge cases before production use

The workflow must validate edge cases before production use.

10. keep the final approval with accountable reviewers

The final approval remains with accountable reviewers.

COMPREHENSION QUESTIONS

1. Why does CDISC give more weight to standards integration and traceability than to innovation alone?
2. What should an objective-to-result trace contain for a TFL?
3. How can a lineage graph improve change-impact analysis?
4. Why are machine-readable analysis metadata more useful than a finished PDF table alone?
5. Which parts of an AI-assisted TFL workflow should remain deterministic or human-approved?

RETELLING PROMPTS

30 seconds: TFL challenge -> traceability requirement -> highest-weight criterion.

45 seconds: Objective -> endpoint -> analysis -> ADaM -> result -> TFL.

60 seconds: Explain how lineage changes QC after a SAP or specification update.

5-MINUTE SPEAKING / OUTPUT TASK

Your role: Design a traceable AI-assisted workflow for one production TFL.

Minute 1: Choose AE, demographics, labs, response, disposition or PFS/OS.

Minutes 2-3: Link objective, endpoint, SAP, population, ADaM, executable analysis, result data and display.

Minute 4: Separate AI interpretation from deterministic calculation and conformance checks.

Minute 5: Explain how the workflow responds when an upstream requirement changes.

ONE SENTENCE TO KEEP

A trustworthy AI-generated TFL is not merely a correct-looking display; it is the visible end of a reproducible, machine-readable and auditable chain from study objective to analysis result.