

Tokenized Securities Readiness: What DTCC Participants Need to Know

Why it matters?

White paper



Editorial note: Scope and methodology

This paper has been prepared for DTC participant firms — custodians, broker-dealers, and asset managers — evaluating their operational readiness for DTC's announced tokenization service. It draws on publicly available regulatory documents, DTCC publications, industry research, and Zensar's consulting work with capital markets participants.

Readers should note the following qualifications:

- **Announced pilot.** The DTC tokenization service is an announced pilot. Implementation timelines, eligibility criteria, and technical specifications are subject to change. Readers should consult DTC directly for current program details.
- **Regulatory.** Regulatory obligations are evolving. The SEC No-Action Letter governing the pilot does not constitute rulemaking. Specific participant compliance obligations may differ from those discussed here and should be confirmed with legal counsel.
- **Not legal advice.** This paper does not constitute legal, regulatory, or compliance guidance. Readers should seek independent legal and regulatory counsel.
- **Not independent research.** This paper is not independent research. Zensar BFS Capital Markets is a consulting firm offering commercial services for tokenized securities operations. Readers should weigh this context accordingly.
- **Source governance.** Statements derived from external sources are distinguished as confirmed facts, publicly communicated roadmaps, analytical inferences, reasonable assumptions, or areas still evolving. Readers should independently evaluate source materials and monitor future regulatory and industry developments.

Series navigation: This is paper 1 of 3 — Why it Matters? For the full six-domain operational framework, domain-by-domain analysis, maturity model, implementation approaches, and risk considerations, see paper 2 (How to Prepare) — Operational Readiness Framework for Tokenized Securities. For pre-production validation, QA, and testing guidance, see paper 3 (How To Validate) — Validating Tokenized Securities Operations.

Executive Summary



What is changing?

DTC, the central securities depository underpinning US equity and fixed-income markets, has announced a tokenization pilot that would allow DTC participants to hold security entitlements on approved DLT networks (Canton is the first announced network, initially for U.S. Treasuries) alongside existing book-entry positions, under a December 2025 SEC No-Action Letter. If the pilot proceeds as communicated, participating firms would for the first time maintain security positions simultaneously across two record-keeping systems — their existing OMS/sub-ledger and DTC's LedgerScan token state record — operating at different update frequencies, using different identifiers, and updated by different authorities, including DTC itself through a root-wallet override mechanism. Operational frameworks built for a single-record environment require structural extension, not configuration, to address this reliably.



Why DTCC is Pursuing Tokenization?

DTCC's tokenization initiative is not primarily a technology modernization program. It is an attempt to create the foundational infrastructure for next-generation capital markets. The long-term industry objectives include improved collateral mobility, programmable securities workflows, expanded operating hours, reduced post-trade friction, and enhanced interoperability across digital and traditional ecosystems. The operational complexity described throughout this paper should therefore be viewed as a transitional challenge created by the pilot architecture rather than the intended long-term market state. DTCC's strategic direction remains focused on simplifying and modernizing market infrastructure over time.



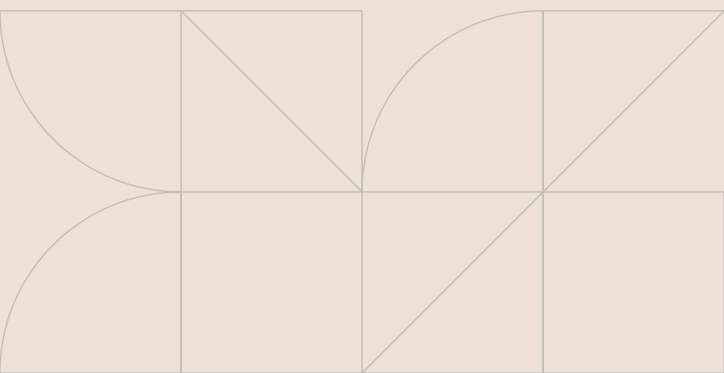
How this paper is organized

The 'key insights' section immediately following sets out the five structural conclusions that should shape program sequencing. The 'at a glance' table answers the five questions a COO is most often asked by their own leadership. Sections 1 through 6 develop the supporting analysis — the structural shift itself, why timing matters, the six operational capability domains, where participant readiness is likely to vary, and where firms most often fail in practice. The 'executive decision framework,' immediately before section 1, converts that analysis into four sequential decisions.



Implementation and validation

A participant may implement the correct architecture across all six domains and still encounter operational failures when first exposed to real production conditions. Pre-production validation — covering synthetic event testing, break injection, corporate action simulation, and root-wallet override testing — is a distinct workstream. Paper 3 of this series addresses this topic in full.



Key insights

Five structural conclusions follow from the facts and inferences developed across this paper. They are stated here up front because each has a direct bearing on how a participant should sequence their readiness program. The supporting analysis for each appears in the section referenced.

Insight 1:

Tokenization increases reconciliation demands before realizing longer-term market structure benefits.

The common narrative around tokenization is disintermediation — fewer intermediate records, less reconciliation. The DTC pilot structure does the opposite for participants: it adds a second authoritative record that updates on a different clock, using a different identifier space, and can move without a participant-originated instruction. Reconciliation does not disappear; it becomes continuous and gains a counterparty — DTC itself — that traditional break models do not anticipate.

Implication: DTCC's strategic objective is not to increase reconciliation permanently, but to enable a transition toward more synchronized market infrastructure. The pilot phase introduces temporary operational complexity as firms adapt to a dual-record environment. Firms that frame their readiness program as "reducing reconciliation burden" are solving the wrong problem. The program should be framed as a redesign of reconciliation for continuous, multi-authority operation. See section 1.2, exhibit 1.

Insight 2:

Authority over the position shifts partially from the participant to the infrastructure.

In traditional book-entry operations, every position change is traced to a participant instruction or a well-understood corporate action. The root-wallet mechanism breaks that invariant: DTC retains administrative authority to intervene in tokenized positions under the pilot framework through the root-wallet mechanism. While this capability introduces a new operational control requirement, it exists to preserve market integrity and operational resiliency rather than to create discretionary position management. Root-wallet use is exceptional and SEC-reported; the more routine source of instruction-less change is a peer-to-peer wallet transfer that settles on-chain without a DTC instruction. Both defeat a control model that assumes the participant always originates the change.

Implication: Control frameworks built on the assumption that the participant always knows why a position changed will systematically misclassify root-wallet events. Override detection (domain 5) is not optional instrumentation — it is a control gap unless explicitly addressed. See section 1.2 and the domain summary, section 3.

Insight 3:

Real-time data breaks the batch control model, not just the batch reconciliation model.

Most operating models treat real-time data as a reconciliation problem — records update at different rates, so comparison logic must run more frequently. That framing understates the issue. Controls, sign-offs, escalation paths, and supervisory review in most operations functions are built around the batch cycle: a discrete end-of-day point at which a position is considered settled and reviewed. A near-real-time external record removes that discrete checkpoint. The control question is not "how often do we compare" but "what does sign-off mean when the thing being signed off can change again before the signature is recorded."

Implication: This is a governance-and-controls design question before it is a technology-integration question. Firms that delegate this entirely to technology teams risk building a fast pipe into a control framework that was never designed to receive it. See exhibit 1, "control maturity" row.

Insight 4:

The build-vs-buy decision is being made on incomplete information by design, not by accident.

ComposerX API schemas, the CA processing framework, and SEC examination expectations are all still evolving. Firms often treat this incompleteness as a reason to delay the build-vs-buy decision entirely. That is a misread of the situation: the talent and integration lead times for internal build do not wait for DTCC's publication schedule, and vendor roadmap commitments take months to negotiate. The decision itself should be made early and explicitly revisited quarterly as specifications firm up—not deferred until the information gap closes.

Implication: "wait for clarity" and "decide now, revisit quarterly" produce materially different production-readiness dates for the same firm. See section 2.2 and section 7, stage 2.

Insight 5:

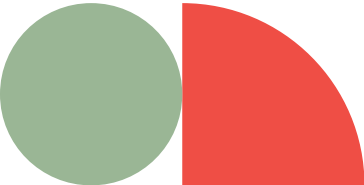
Readiness is not a single state; it is a function of the onboarding wave, and most firms do not yet know their wave.

The onboarding wave is the single most consequential input — but the more important observation is that most participant firms have not yet asked DTCC directly. Readiness investment decisions are being shaped by internal assumptions about urgency rather than confirmed onboarding sequencing. This is the single highest-leverage, lowest-cost action available to any participant this quarter.

Implication: Before any technology or staffing decision, confirm onboarding wave directly with DTCC. It is the cheapest readiness action in this paper, and the one most often skipped. See "Executive decision framework - Q1".

At a glance: Five questions an executive should be able to answer

Question	Short answer
What has changed?	DTC has announced a tokenization pilot that would require participants who elect tokenized recording to maintain security positions in two systems simultaneously — the traditional book-entry system and a new tokenized record on the Canton blockchain. These systems update at different frequencies and are governed by different authorities.
Why does this create new operational requirements?	The combination of near-real-time external updates, DTC's root-wallet authority to modify positions without participant instruction, and a new identifier space means that existing end-of-day reconciliation frameworks are unlikely to be sufficient without extension.
What should firms do now?	Assess current-state readiness across six operational capability domains. Confirm the expected production timeline with DTCC. Engage legal counsel on regulatory evidence obligations.
What remains genuinely uncertain?	ComposerX API specifications are not yet fully published. SEC examination expectations for participant controls have not been communicated. DTCC has not specified the CA processing architecture for dual-record positions. Vendor platform readiness is still being defined.
What is the single most important first action?	Confirm your firm's expected production onboarding timeline directly with DTCC. The appropriate urgency of readiness investment depends entirely on whether your firm is in the first production wave or a subsequent one.



Executive decision framework

Four questions determine the urgency and direction of your readiness program. Answer them in order. The analytical basis for each question is developed in Sections 1–7 of this paper.

Level	If the answer is yes	If the answer is no
Q1. Is your firm in the first production wave? <i>Confirm directly with DTCC. This is the single most consequential input to your readiness plan.</i>	Begin readiness assessment immediately. Limited production went live in July 2026 with real assets; the full-service launch is targeted for October 2026. Lead time for implementation is measured in months.	Begin stage 1 assessment now to understand exposure. Use the observation period to monitor API specifications and vendor roadmaps. Review quarterly.
Q2. Does your existing vendor have a confirmed roadmap for tokenized securities? <i>"Confirmed" means a committed delivery date with specific ComposerX API version support, not a press announcement.</i>	Evaluate the extension path. Integration complexity is lower; timeline risk shifts to the vendor. Require written commitments before planning around vendor delivery.	Assess alternatives: internal build (requires DLT capability), a specialist accelerator (faster to market), or a hybrid approach that combines both. See paper 2, section 6.
Q3. Does your firm have internal DLT/Canton capability? <i>DLT/Daml expertise (Canton where the firm's chosen network requires it) is limited in the market. Talent planning is a three- to six-month workstream if the internal build is chosen.</i>	Internal build remains a viable option. Begin talent planning in parallel with technical planning, not sequentially. Best suited for tier-1 participants with prior investment in Canton.	Prioritize either a vendor platform extension or a specialist accelerator. A full internal build without existing DLT capability is unlikely to meet early production timelines.
Q4. Have you confirmed regulatory evidence obligations with legal counsel? <i>SEC examination expectations for tokenized position controls have not been formally communicated. The risk of doing nothing is unknown but not zero.</i>	Proceed with readiness planning. Ensure counsel continues to monitor SEC developments and feeds updates into your program.	Engage legal and compliance counsel before committing to a technical path. Regulatory clarity may affect which domains require the most urgent attention and what evidence standards to design for.

Implementation guidance for the decisions generated by Q2 and Q3 appears in paper 2, section 6. Pre-production validation guidance appears in paper 3.

"To pressure-test your wave assumption and domain exposure, Zensar runs structured readiness workshops - see contact details on the final page"

Executive Decision Tree — Four Questions, In Order

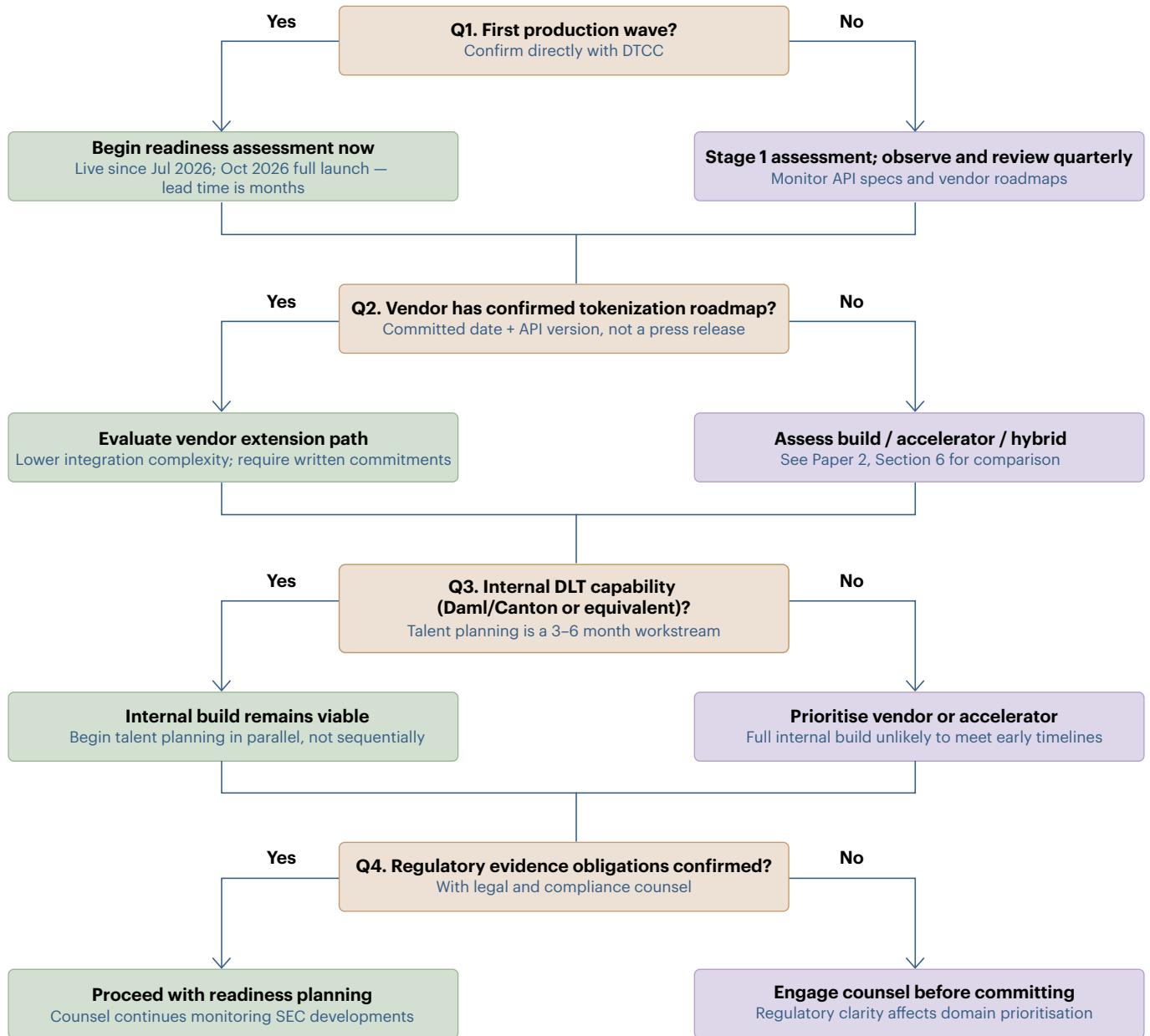
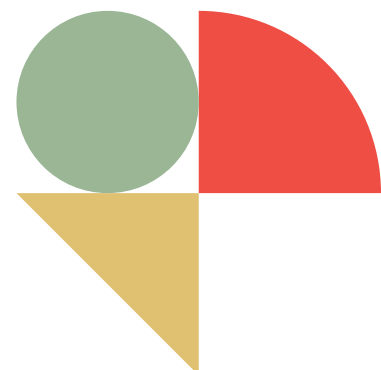


Figure 1. The four questions from the table above are shown as a sequential decision path. Each branch leads to the next question, not a terminal outcome, and all four should be answered.



1. What is changing?

The structural shift in position record keeping

Capital markets infrastructure has undergone repeated waves of technological change — the transition to electronic trading, straight-through processing, the compression of settlement cycles from T+3 to T+2, and then T+1. Each transition introduced new operational demands. Tokenization, as currently structured under the DTC pilot, introduces a qualitatively different kind of change.

Prior transitions involved replacing or accelerating existing processes. Tokenization, as described in publicly available DTC documentation, involves running a new record-keeping system in parallel with, not instead of, the existing book-entry system. That parallel operation, rather than any specific technical requirement, is the source of most of the operational challenges discussed in this paper.

1.1 The DTC tokenization service — confirmed facts

On December 11, 2025, the SEC's Division of Trading and Markets issued a no-action letter authorizing DTC to operate a three-year tokenization pilot.¹ Under the pilot as described in DTC's request letter, the service would allow DTC participants to elect tokenized record-keeping for eligible securities — initially Russell-1000 constituents, major index ETFs, and US Treasury securities.

DTCC facilitated initial limited production trades in July 2026, and has stated that a full-service launch is planned for October 2026, followed by broader rollout during the pilot period.² These timelines are based on DTCC's publicly stated roadmap and may be subject to revision depending on technical readiness, regulatory feedback, and participant onboarding progress.

DTC's ComposerX platform suite supports the service through three subsystems: LedgerScan (providing near-real-time token activity monitoring, reconciliation, and consolidation of on-chain events back to off-chain systems), Factory (token minting, issuance controls, and reference-data/compliance utilities), and the Capital Markets Platform or CMP (the integration layer connecting tokenized-asset lifecycle management to traditional middle- and back-office systems)³

The no-action letter specifies that tokenized entitlements will not carry collateral or settlement value for DTC's risk management calculations during the pilot period.¹ This design choice limits systemic exposure but also affects how participants may account for and report tokenized positions.

1.2 The structural consequence: Two records, one position

The core operational implication of the pilot structure is straightforward to describe but non-trivial to address: a participant who elects tokenized record-keeping for a security position would maintain that position in two separate systems simultaneously.

One record is the traditional DTC book-entry entitlement in the participant's OMS or sub-ledger, updated through batch processes. The other is the tokenized entitlement in LedgerScan, which updates in near real time as token events occur on the approved network. These two records use different security identifiers, are governed by different authorities, and can diverge — temporarily or persistently — through ordinary market events. Two features generate position changes with no corresponding participant-originated instruction to reconcile against. First, a participant may transfer a tokenized entitlement directly to another participant's registered wallet, settling on-chain in near real time without instructing DTC. Second, and more exceptionally, DTC's root-wallet mechanism allows it to reverse or amend a tokenized position to address errors or malfeasance — an intervention it must report to the SEC each quarter. Throughout, the underlying security remains registered to DTC's nominee, Cede & Co., and tokenized entitlements are offset within a Digital Omnibus Account on DTC's centralized ledger to prevent double-counting against the book-entry position. Exhibit 1 sets out the structural differences and their operational implications.

Analyst note. Whether this dual-record structure represents a fundamental departure from existing operations or an extension of existing reconciliation practices is a legitimate question. A custody operations executive might reasonably argue that reconciliation between internal records and external records is already well-understood. The question is whether the specific characteristics of the tokenized record — real-time updates, external authority modifications, different identifier spaces — require new operational architecture or can be accommodated within existing frameworks. This paper assumes the former for most firms, but acknowledges that large, sophisticated participants with modern technology stacks may reach a different conclusion.

Exhibit 1. Traditional vs. tokenized reconciliation — structural comparison

This comparison is analytical, not prescriptive. Large custodians with event-driven OMS infrastructure may address several of these characteristics through targeted extension rather than new infrastructure.

Dimension	Traditional book-entry	Tokenized (LedgerScan)	Operational implication
Update cadence	End-of-day or intraday batch (T-cycle)	Near-real-time, event-driven, on-chain.	EOD reconciliation cycles may miss intraday divergence; comparison logic must run continuously or near-continuously
Record authority	Participant's OMS, confirmed against DTC batch	DTC's centralized ledger holds ultimate authority; LedgerScan is the near-real-time off-chain view against which participants reconcile.	Dispute resolution hierarchy changes; DTC's tokenized record prevails in ways the traditional entitlement record does not
External position modification	Participant-initiated only	DTC root-wallet can modify participant positions without instruction	Creates a class of position changes with no participant-side originating event to match against
Identifier space	CUSIP / ISIN (standardized, stable)	Chain-native token identifiers requiring mapping to CUSIP/ISIN	Identifier resolution is a prerequisite for comparison — not assumed in existing reconciliation tooling
Control maturity	Mature — decades of examination history, standardized break taxonomies	Emerging — no industry-standard taxonomy; examination expectations not yet communicated	No standardized break taxonomy or examination precedent exists; classification logic and evidentiary standards must be designed, not inherited.

What makes the tokenized environment operationally distinct is not any single row above, but the combination. Custodians already handle multiple external records. What they have not previously encountered is a record that updates in near real time, can be modified by the depository without instruction, requires identifier translation, and has no established examination precedent — all simultaneously on the same live position.

Dual-Ledger Architecture — Two Authoritative Records, One Position

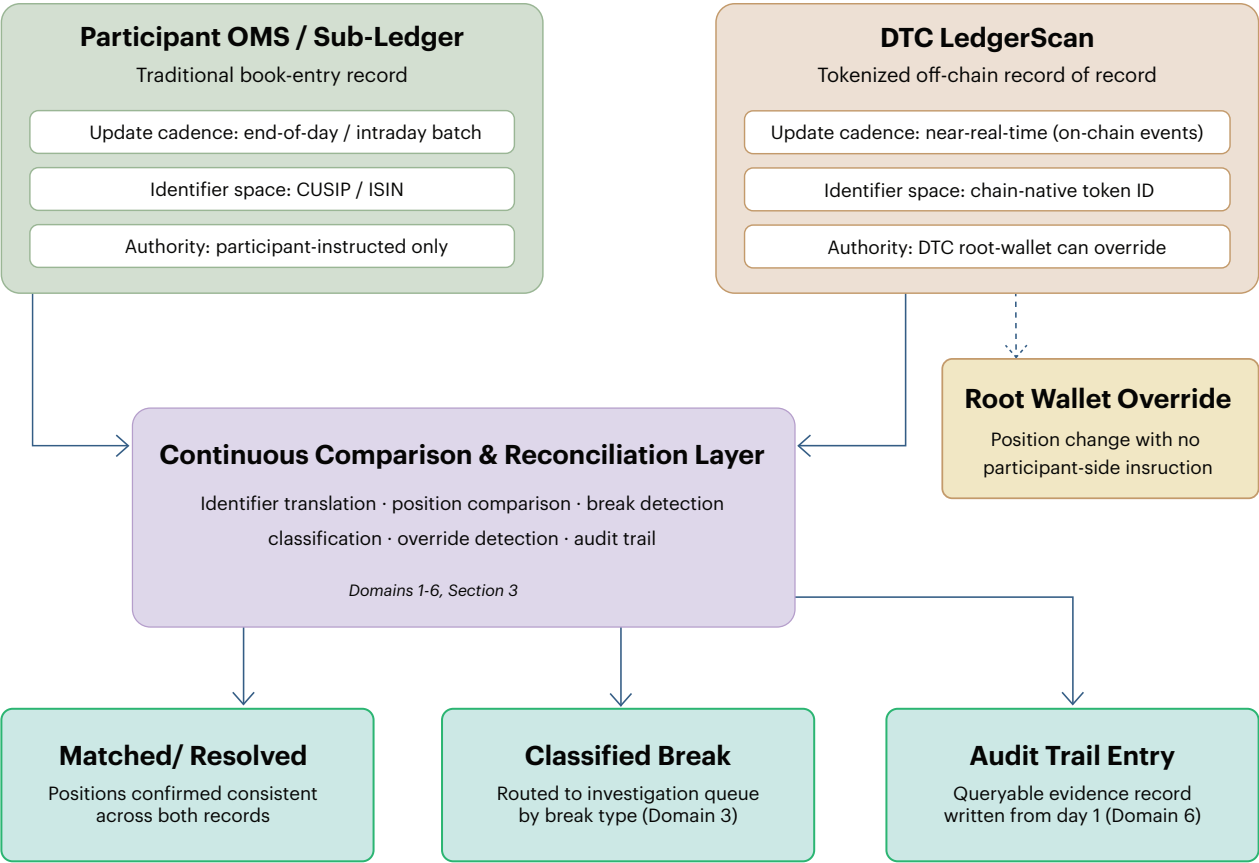


Figure 2. The dual-ledger structure described in exhibit 1 is shown as an operating flow. The reconciliation layer is where domains 1-6 are exercised in combination.

1.3 What we know vs. what we infer

The following table distinguishes confirmed facts from reasonable inferences and areas where implementation details remain uncertain. Operational decisions anchored in confirmed facts carry less planning uncertainty than those anchored in inferences.

Category	Statement	Basis and qualification
CONFIRMED	DTC has received SEC No-Action relief to operate a three-year tokenization pilot.	SEC NAL, December 11, 2025. Confirmed fact.
CONFIRMED	Eligible securities include the Russell 1000, major ETFs, and US Treasuries.	DTC's request letter, as described in the SEC NAL.
CONFIRMED	DTC retains root wallet keys, allowing it to retain administrative authority to intervene in tokenized positions in order to preserve market integrity and operational resiliency rather than to create discretionary position management.	Explicitly described in DTC's NAL request letter.
CONFIRMED	Tokenized entitlements carry no collateral or settlement value in DTC's risk management during the pilot.	Explicitly stated in the NAL structure.
CONFIRMED	DTCC has convened 50+ firms in a working group and publicly communicated limited production in H2 2026.	DTCC press release, May 4, 2026.
CONFIRMED	Limited production trades began in July 2026; full-service launch targeted for October 2026.	DTCC public communications. Subject to revision based on technical readiness and participant onboarding.
COMMUNICATED ROADMAP	The service will be delivered through ComposerX (LedgerScan, Factory, CMP).	DTCC public documentation. Specific API specifications and schemas have not yet been fully published.
REASONABLE ASSUMPTION	Participants will need to integrate LedgerScan event data with their internal position systems.	Follows logically from the dual-record structure. Specific integration requirements depend on unpublished API details.
REASONABLE ASSUMPTION	Existing end-of-day reconciliation processes will likely be insufficient for managing real-time token events.	Based on known characteristics of LedgerScan's near-real-time update model. Not confirmed by DTCC.
STILL EVOLVING	The specific API schemas, authentication mechanisms, and event formats for LedgerScan and CMP.	Not yet fully published. Critical for integration planning.
STILL EVOLVING	How corporate actions will be processed for securities held in traditional and tokenized form simultaneously.	Widely identified as a significant operational challenge. Implementation framework not yet published.
STILL EVOLVING	Specific participant-level regulatory reporting and evidence obligations.	Not communicated by the SEC or DTCC as of this writing.

2. Why operational readiness warrants early attention

The timing of participant readiness investments is not straightforward. Different participant types face materially different operational exposures and have materially different implementation resources. Three factors, taken together, suggest that a structured assessment and planning activity is warranted now.

2.1 The H2 2026 production timeline

DTCC communicated an expectation of limited production in July 2026, which began as scheduled. That initial production phase involves real assets and real settlement obligations — not a sandbox environment. Firms participating in initial production would face actual settlement obligations before the broader participant community has accumulated operating experience with the service.

Whether a participant will need to be production-ready for initial limited production or can use that phase as an observation period will depend on their working group status, client demand, and DTCC's onboarding sequencing, which has not been fully communicated. Firms should confirm their expected production onboarding timeline directly with DTCC. That single answer determines the urgency of everything else in this paper.

Program Timeline — Confirmed Dates and Communicated Roadmap

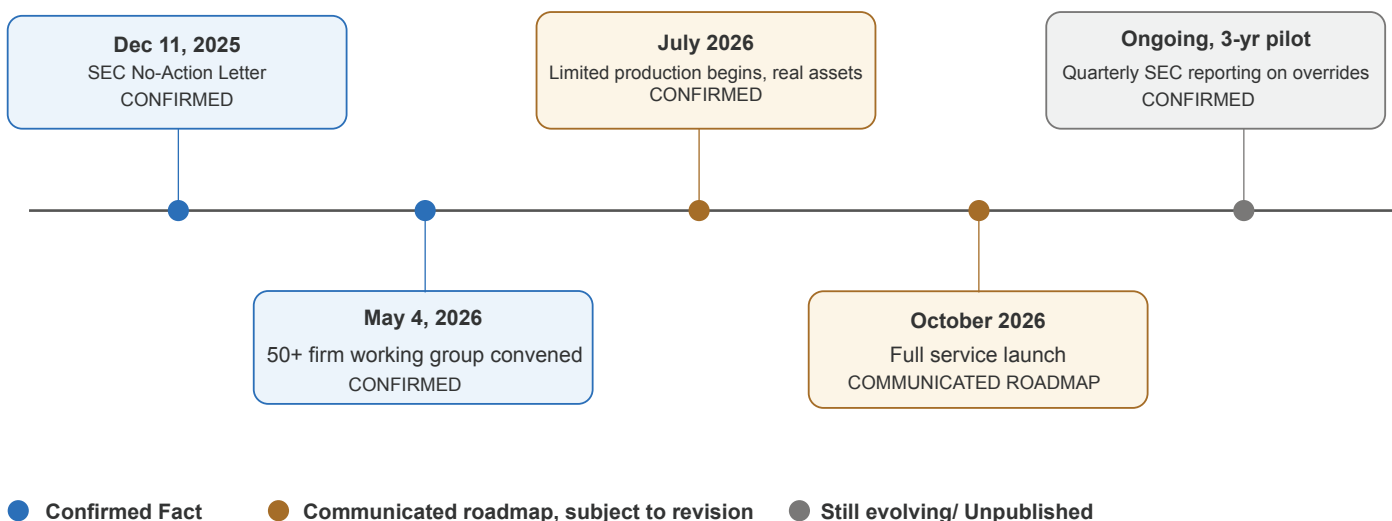


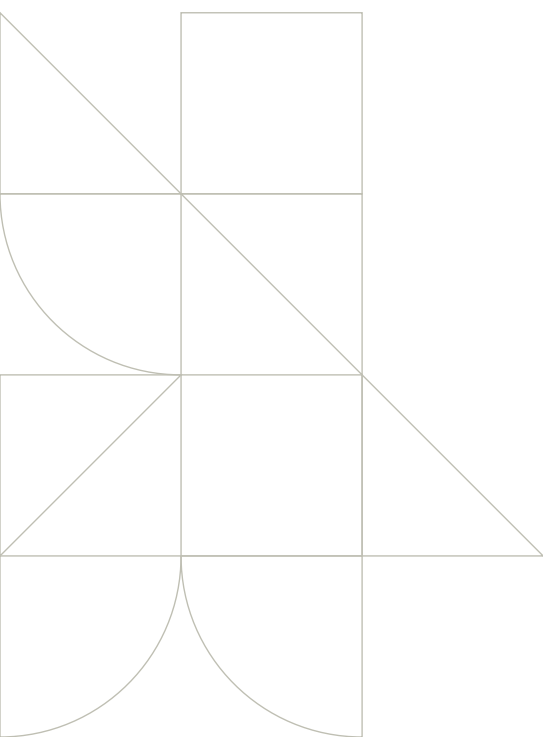
Figure 3. Confirmed facts (blue) versus communicated roadmap items subject to revision (amber) and still-evolving items (gray), per the source governance framework in the editorial note.

2.2 Program intersections and talent

The tokenization program, if it proceeds as communicated, would overlap with other significant operational initiatives for many participant firms. ISO 20022 SCoRE phase 2 — the corporate action message migration — is targeting end-2026 for European markets. Whether this intersects with dual-record CA processing architecture is an analytical inference rather than a stated requirement, but participants should assess the potential overlap early. [Analytical inference — not stated in DTC or ISO 20022 program documentation.]

Building the operational capabilities described in this paper requires expertise at the intersection of traditional post-trade operations and distributed ledger technology — a combination not yet widely available in the market. Firms considering an internal build should treat talent planning as a parallel workstream, not a sequential one; the lead time is material. Firms considering vendor or accelerator routes have significantly more flexibility on this dimension, which is one reason the build vs. buy vs. configure decision should be made early.

Build vs. buy vs. configure. A skeptical COO might reasonably ask whether the internal build model is the right one at all. The most resource-efficient path for many participants may be to leverage established vendor platforms — Broadridge's announced tokenized securities infrastructure, Digital Asset's Canton capabilities, or emerging offerings from other established post-trade technology firms — rather than treating this as an internal development program. The build vs. buy vs. configure decision should be a first-order question in any readiness program, not an afterthought. Section 6 of paper 2 addresses this in detail.



3. The six capability domains

This section introduces the six-domain framework at an executive level. The framework identifies six operational capability areas that are likely to be relevant to participants who elect tokenized record-keeping. They represent an analytical view of the operational functions that the dual-record structure may require — not a prescription. Detailed domain-by-domain analysis, implementation approaches, and risk considerations appear in Paper 2.

Exhibit 2. The six operational capability domains

The diagram below shows the dependency structure of the six-domain framework. Domains 1 and 2 are prerequisites for all downstream capabilities. Domain 3 is the operational hub. Domains 4 and 5 can be sequenced based on the exposure profile. Domain 6 spans all domains.

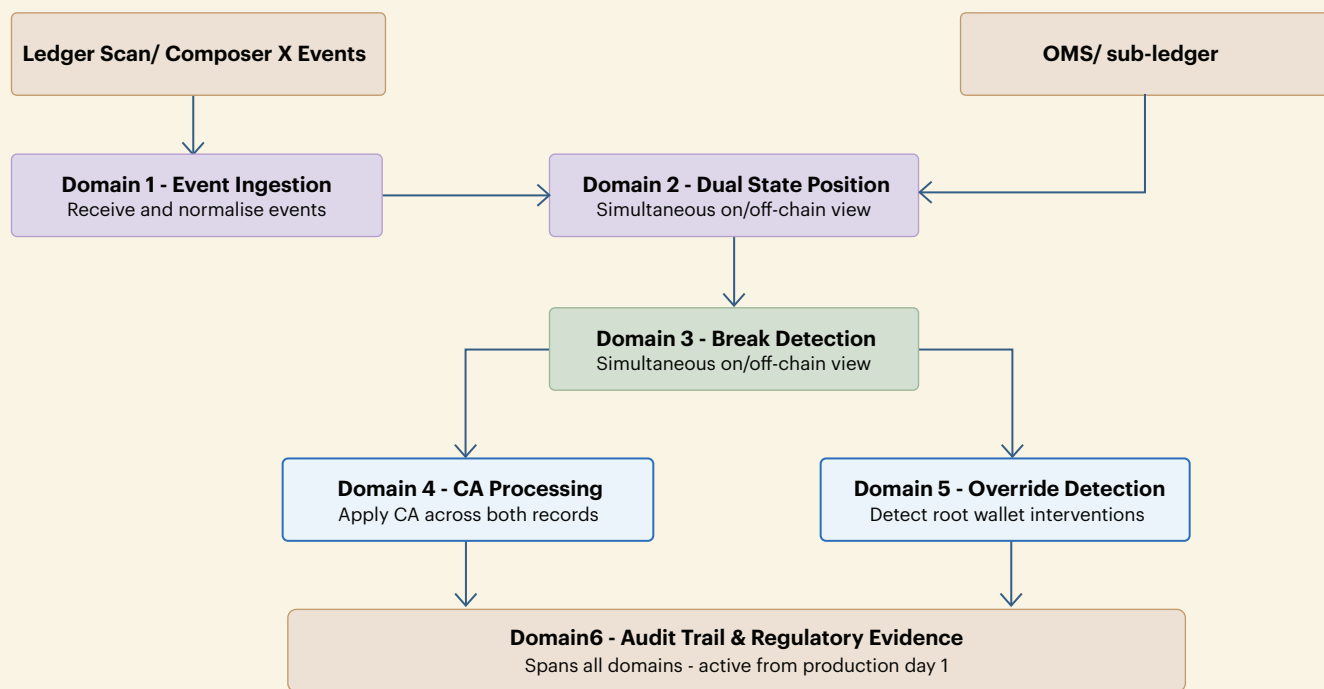


Figure 4. Six domain dependency structure.

Domains 1-3 are foundational prerequisites for production entry. Domains 4 and 5 depend on operational exposure: Domain 4 urgency is driven by CA complexity; Domain 5 urgency is driven by observed override frequency. Domain 6 spans all domains and should be active from day one. This framework is an assessment model, not a mandated architecture. Full domain-by-domain analysis appears in paper 2 of this series.

Domain Summary

Domain	What it addresses	Key planning point
1: Event ingestion	Receiving and normalizing token events from DTC's ComposerX subsystems in a form that operational systems can consume.	All downstream domains depend on this. Defer detailed technical build until specs publish; do not defer the build-vs-buy decision (see Insight 4).
2: Dual-state position	Maintaining a simultaneous view of both on-chain tokenized and off-chain book-entry positions for each eligible security.	Foundation for break detection. Modern OMS infrastructure may be accommodated through extension rather than new build.
3: Break detection	Identifying discrepancies between the two position states, determining which are expected timing differences, and which require action.	Requires a provisional break taxonomy before onboarding; timing-difference vs. genuine-break logic cannot be inherited from batch reconciliation codes.
4: CA processing	Applying corporate action events consistently across both traditional and tokenized position records.	Most complex domain. Urgency depends on the tokenized portfolio's CA profile. Defer detailed technical build until specs publish; do not defer the build-vs-buy decision (see Insight 4).
5: Override detection	Detecting and documenting instances where DTC exercises its root-wallet capability to modify positions without participant instruction.	Investment should be proportionate to observed override frequency. Basic monitoring first; automate if frequency warrants.
6: Audit trail	Maintaining a queryable record of tokenized position events, discrepancies, and resolutions for regulatory examination.	Should be active from day one of production. Extending the existing audit infrastructure is likely more efficient than building a new one.

Conditions under which this framework may be overstated. The operational complexity described above may be significantly lower if DTCC provides a managed participant integration layer for ComposerX (reducing per-firm domain 1 burden); established vendors absorb most of the operational complexity within existing platform relationships; root-wallet interventions remain extremely rare; or participant adoption in the early pilot phase remains limited. Participants should monitor for these conditions and adjust readiness investment accordingly.

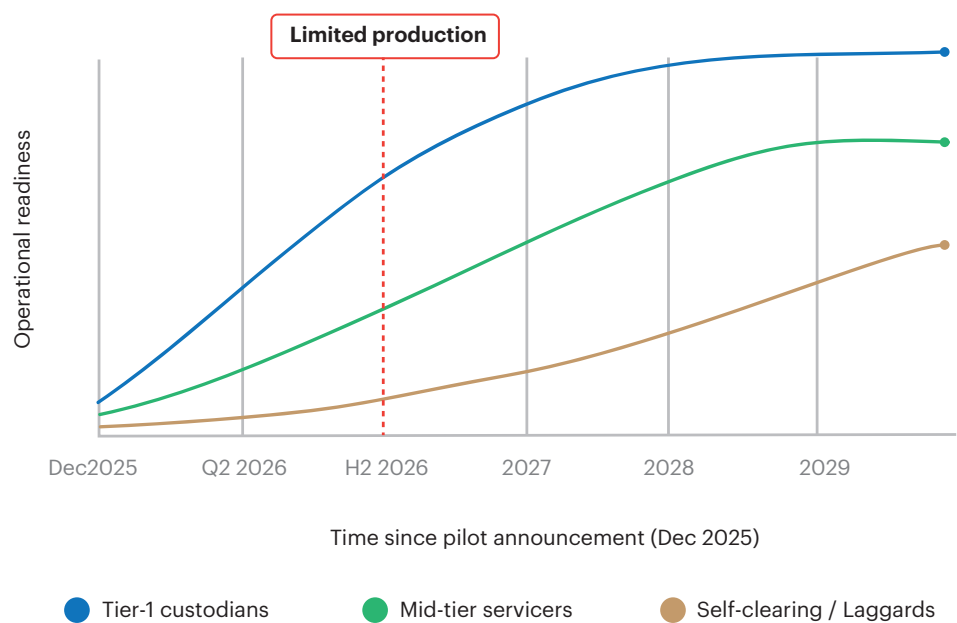


4. Participant readiness heatmap

Heatmap methodology and limitations. Ratings represent Zensar's analytical inference, not the result of primary firm-level research. They draw on: known infrastructure characteristics of each participant category from public disclosures and industry surveys; the operational demands of each domain as described in Paper 2; and analogous readiness patterns from prior infrastructure transitions, including T+2-to-T+1 compression and CSDR implementation in European markets.

Participant Readiness Maturity — Illustrative Curve by Category

Directional analytical inference, not survey data — see Section 4 methodology note



Within-category variance is significant. A mid-tier custodian will likely outperform a Tier-1 firm on legacy batch infrastructure. Use as a self-assessment prompt, not a peer benchmark. See Paper 2, Section 9 for detailed participant profiles.

Figure 5. Illustrative readiness trajectories by participant category, plotted against the H2 2026 limited-production marker. Directional, not survey-derived — see methodology note above.

5. Where firms will struggle

The readiness heatmap above describes relative exposure across participant categories. It does not describe the specific mechanisms by which readiness programs fail in practice. Five failure patterns recur across prior infrastructure transitions and are likely to recur here. None is exotic — each is a known operational failure mode applied to an unfamiliar problem.

5.1 Inability to handle real-time event ingestion at production volume

Problem. Firms pilot Domain 1 integration against a small, hand-picked set of test securities and low message volumes, then discover that the ingestion architecture designed for that test profile does not scale to the full eligible universe — Russell-1000 constituents, major ETFs, and Treasuries — under live event-driven load.

Why does it occur? Batch-oriented infrastructure teams default to batch-shaped thinking even when building "real-time" pipes — polling intervals, queue depth assumptions, and retry logic are often calibrated against EOD-cycle expectations rather than continuous event streams. Because ComposerX API schemas are not yet fully published, teams frequently build against an assumed message format that diverges from the eventual specification, leading to rework.

Implication. Volume and load assumptions should be stress-tested against the full eligible universe from the start, even though full production may begin with a narrower subset. Designing for the test case and hoping the architecture generalizes are recurring sources of late-stage rework.

5.2 Absence of a break classification framework

Problem. No industry-standard taxonomy exists for tokenized-position discrepancies. Without one, every discrepancy between on-chain and off-chain records defaults to manual investigation, because operations staff have no rule set to distinguish an expected timing difference from a genuine break that requires escalation.

Why does it occur? Firms reasonably attempt to map tokenized position breaks to existing reconciliation break codes. Those codes were designed for a single-authority, batch-updated environment and lack categories for root-wallet-originated changes or for differences

explained solely by an update-cadence mismatch rather than an actual discrepancy. The taxonomy gap is structural, not a documentation oversight.

Implication. At meaningful position volumes, a firm without a working break taxonomy cannot triage — every discrepancy escalates equally, and the operations team is effectively unable to prioritize genuine risk. A purpose-built classification model, even a provisional one, should precede production onboarding rather than evolve reactively in response to accumulated incidents.

5.3 Identity and identifier mapping gaps

Problem. Chain-native token identifiers must be reliably mapped to CUSIP/ISIN before any cross-record comparison is possible. Firms underestimate this as a one-time reference-data exercise rather than an ongoing operational dependency, particularly across corporate action events that can alter identifier mappings mid-lifecycle.

Why does it occur? Reference data functions are typically organized around relatively static relationships among identifiers. A token ID space introduces a new identifier type whose mapping logic has not been exercised through a full corporate action cycle — stock splits, mergers, and similar events that change the underlying security's identity are where mapping logic most often breaks.

Implication. Identifier mapping should be tested explicitly against simulated corporate action events before production, not validated only against steady-state holdings. This is a domain 4 dependency that is frequently treated as a Domain 1 problem and under-resourced as a result.

5.4 Absence of a regulatory evidence model

Problem. Firms that enter production are able to detect and resolve operational breaks but are unable to produce a coherent, examination-ready record of what happened, when, and why — particularly for root-wallet interventions where no internal instruction exists to anchor the evidence trail.

Why does it occur? SEC examination expectations for tokenized position controls have not been formally communicated, so firms have no specification to build against. Audit trail work is consequently deprioritized relative to break resolution, since resolving the position correctly feels more urgent than documenting how it was resolved — until an examiner asks for the documentation.

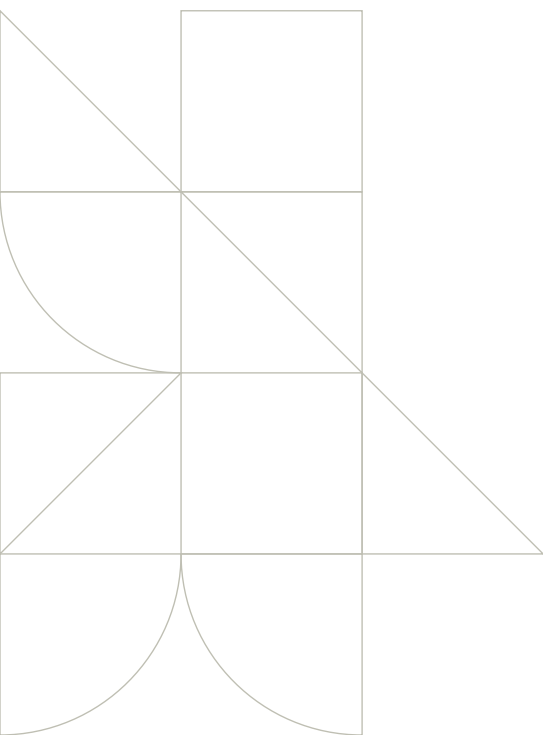
Implication. Domain 6 should be built to a reasonable evidentiary standard inferred from adjacent regulatory regimes — not deferred until SEC expectations are published. Retrofitting an audit trail after the fact, from logs not designed for examination, is materially harder than building one from day one of production, as the paper's Domain Summary already recommends.

5.5 Over-reliance on existing reconciliation tooling

Problem. Firms assume their existing reconciliation platform can be extended to handle tokenized positions through configuration alone, then discover during integration that the platform's core assumptions — batch cadence, single external authority, stable identifier space — are embedded too deeply to extend without substantial rework.

Why does it occur? Extension is the path of least resistance, and vendor relationship teams are naturally inclined to describe their platform's capability in the most favorable terms before a firm commitment is tested against the specific demands of dual-record, multi-authority reconciliation. The gap between "the platform can be configured for this" and "the platform was designed for this" is discovered late, typically during integration testing rather than vendor selection.

Implication. As Section 2.2 notes, written roadmap commitments with specific ComposerX API version support — not press announcements — are the only reliable signal of vendor readiness. Firms should require a working proof of concept for the actual dual-record problem before relying on an extension path in their program plan.

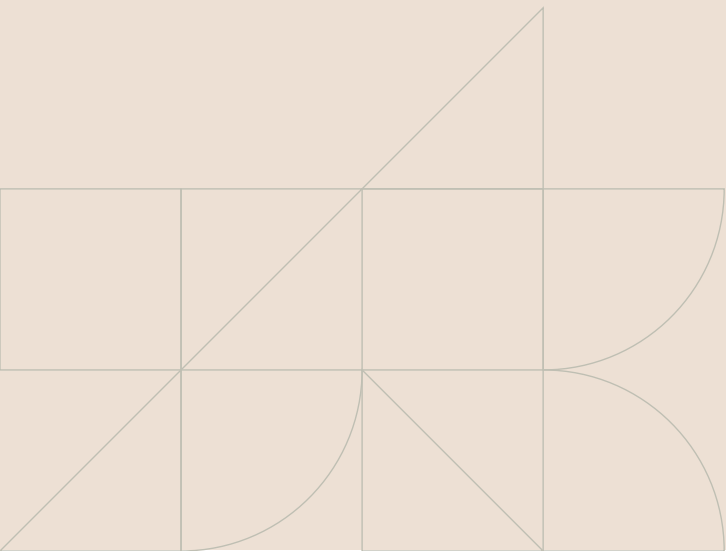


6. What to watch: Five areas most likely to change

Section 1.3 captures the state of knowledge as of June 2026. The five areas below are most likely to change materially before a participant needs to make a production commitment. Participants should designate a monitoring owner for these areas and establish a quarterly review cadence.

Area	What to watch for	Planning implication
ComposerX API specifications	Authentication mechanisms, event schemas, rate limits, and failover behavior for LedgerScan, Factory, and CMP.	Defer domain 1 planning until complete API documentation is published. Engage DTC directly on availability.
CA processing framework	DTCC working group outputs and any published guidance specifically on CA atomicity for dual-record positions.	Domain 4 planning should be treated as provisional until this framework is published.
Regulatory evidence expectations	SEC examination guidance, staff speeches, or findings from the early production phase.	Engage legal counsel to monitor actively. Do not assume the traditional examination framework applies unchanged.
Vendor platform readiness	Confirmed platform releases with specific eligible securities coverage and DTC API version support.	Require written roadmap commitments from existing vendors. Press announcements are not planned inputs.
Root-wallet intervention frequency	Override frequency may become visible through DTCC's quarterly SEC reporting or subsequent disclosures; public availability of participant-relevant override statistics is not yet confirmed.	High-frequency changes substantially affect Domain 5 urgency. Do not invest heavily in automated detection before this data is available.

The full monitoring framework — with detailed guidance on each of the five areas above — is provided in section 7 of paper 2.



7. Recommended first actions

The following actions reflect a staged, risk-proportionate approach to readiness. They are sequenced so that participants avoid committing to specific technical architectures before the necessary information is available. Stages 3 through 5 — covering implementation, validation, and operational optimization — are addressed in full in Papers 2 and 3 of this series.

	Recommended actions
Stage 1: Understand your exposure	1. Confirm with DTCC whether and when your firm is expected to participate in the initial limited production phase and subsequent broader rollout. 2. Identify all securities in your custody or inventory that are eligible for the DTC tokenization pilot (Russell-1000, major ETFs, US Treasuries). 3. Flag to counsel that a regulatory-evidence assessment will be required; scope it in Stage 2. 4. Identify which of the six operational domains are addressed — even partially — by your current technology stack.
Stage 2: Assess your options	5. Confirm whether your existing vendors (Broadridge, FIS, SmartStream, and others) have published firm roadmaps for tokenized securities capabilities — not press announcements, but confirmed delivery timelines with specific ComposerX API version support. This answer determines whether a vendor extension path is available. 6. Make the build vs. buy vs. accelerator decision at the program level — not as a default or afterthought. This single decision determines the talent model, the timeline, and the investment profile. Section 6 of Paper 2 provides a structured framework for this comparison. 7. Engage legal and compliance counsel specifically on the regulatory evidence obligations applicable to your expected production wave. The SEC has not communicated its examination expectations for participant-level tokenized position controls; the risk of not having counsel's view before committing to a technical path is material.

Stages 3-5 (build, validate, optimize). After completing Stages 1 and 2, the program moves to building or configuring core capabilities across the six domains, pre-production validation through synthetic event testing and break injection, and operational optimization based on production experience. These stages are addressed in full in paper 2 (Operational Readiness Framework) and paper 3 (Validating Tokenized Securities Operations).

8. Conclusion

What is confirmed is narrow but consequential: the SEC has granted no-action relief, a 50+ firm working group is engaged, and DTCC launched limited production in July 2026, with a full-service launch planned for October 2026. What remains genuinely uncertain is equally consequential: the ComposerX API specifications, the corporate-action processing framework, participant-level regulatory evidence obligations, and vendor platform readiness are all still being defined.

The immediate objective is not implementation — it is determining when readiness action is required. For firms in the first production wave, that point is now. For others, the timing depends on the intersection of four factors covered in this paper: expected onboarding wave, confirmed vendor roadmap, internal DLT capability, and regulatory evidence obligations. The Executive Decision Framework — immediately preceding Section 1 — is designed to answer that question. It is the right starting point before making any investment in a program.

This is Paper 1 of a three-paper series — Why It Matters?

Paper 2 (How To Prepare) — Operational Readiness Framework for Tokenized Securities — provides a full six-domain analysis, domain-by-domain implementation guidance, maturity model, an operational risk assessment, and a comparison of implementation approaches. Paper 3 (How To Validate) — Validating Tokenized Securities Operations — provides a pre-production validation framework, guidance on break injection, and a QA playbook.

To discuss operational readiness assessment, Zensar BFS Capital Markets offers structured readiness workshops for DTC participant firms. Contact info@zensar.com.

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