TSM Book

What TrueSource Metals is. Why we built it. In one place.

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> *"The first step toward knowledge is to know that we are ignorant."*
>
> *— Richard Cecil*

> *"Data is not information, information is not knowledge, knowledge is not understanding, understanding is not wisdom."*
>
> *— Clifford Stoll*

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The problem was not a lack of data. It was a lack of a single place where data could be trusted.

Chapter 1 · Why TSM Exists

Metals markets have never lacked for data. The London Metal Exchange has published official settlement prices since 1877. The USGS has catalogued mineral reserves since 1900. LBMA Good Delivery rules have governed gold bar standards for generations. The problem is not the absence of authoritative information. The problem is fragmentation: those sources are scattered across dozens of agency websites, exchange portals, regulatory filings, and standard-setting bodies, each with its own format, access convention, and level of technical opacity.

A professional trying to understand, say, the relationship between cobalt production in the Democratic Republic of Congo, LME warrant status, and the regulatory treatment of a tokenized cobalt instrument under MiCA would need to hold at least five browser tabs open simultaneously — the USGS Mineral Commodity Summaries, the LME contract specification, the EU's ESMA portal, perhaps a Bloomberg terminal subscription, and a legal text. None of those sources point to each other. None of them explain the chain of reasoning. The professional is left to assemble the picture alone.

TrueSource Metals — TSM — was built to solve exactly that problem. Its founding principle is OTSFA: One True Source for All. The name is deliberately paradoxical. There is, of course, no single institution that issues all metals data. The LME sets base metal contracts. LBMA sets gold delivery standards. USGS measures reserves. ISO defines purity grades. Each is sovereign in its domain. OTSFA does not pretend otherwise. What it asserts is that TSM functions as the single point of consolidation — the place where every relevant authoritative source is indexed, cross-linked, glossed, and made navigable, without adding a layer of interpretation that could introduce error or bias.

The timing of TSM's founding reflects a specific historical moment. The rise of real-world asset tokenization — the practice of representing physical commodities as digital tokens on public blockchains — created an entirely new category of information need. Professionals building tokenized gold products needed to understand both LBMA Good Delivery Rules and MAS regulatory requirements. Investors evaluating a tokenized platinum instrument needed to understand both LME contract specifications and FINMA licensing frameworks. That dual literacy — physical and digital, exchange and regulator — did not exist in one place anywhere. TSM was built to be that place.

TSM is independent. It is not owned by an exchange, a bank, a data vendor, or a regulator. It takes no advertising revenue, sells no price data subscriptions, and has no commercial relationship with any of the producers, exchanges, or token issuers it describes. That independence is not merely ethical preference. It is structural necessity. A platform that consolidates primary sources can only be trusted if it has no financial incentive to favor any one of them.

TSM launched publicly on 16 June 2026 at 22:45 HKT — Day Zero. The platform was operational across two domains, covering 61 metals, more than 840 producers, 960 glossary terms, 9 calculators, and a family of 16 original indices. This document is the canonical description of what TSM is, how it works, and why every editorial decision was made the way it was.

One platform, two vocabularies: the physical world and the tokenized world, mapped onto each other.

Chapter 2 · Two Sides of One Coin

TSM operates across two domains that are architecturally separate but intellectually unified. The separation is deliberate. Physical metals reference and tokenized metals reference draw on different primary sources, serve different professional communities, and demand different navigational logic. But the underlying substance — the metals themselves, their properties, their value chains, their regulatory treatment — is the same. The two domains are two lenses on one reality.

The Hub, at hub.truesourcemetals.com, is the physical reference domain. It is the older vocabulary. When a smelter quotes prices ex-works Rotterdam, when a trader calculates treatment and refining charges on a copper concentrate shipment, when a compliance officer screens a counterparty against the OFAC Consolidated List — all of that takes place in the world the Hub describes. The Hub covers 61 metals across their entire value chain: ore bodies, concentrates, refined metals, alloys, and end-use products. It links to exchange rules, USGS reserve data, ISO purity standards, and sanctions lists. It does not interpret any of those sources. It indexes them.

The WWW domain, at www.truesourcemetals.com, is the tokenized reference domain. It addresses a community that is newer and, in many ways, less settled. Token issuers, RWA fund managers, compliance teams at digital asset exchanges, and institutional investors trying to evaluate tokenized commodity products need a very different set of tools than a physical metals trader. They need to understand how a gold token relates to the underlying LBMA Good Delivery bar that backs it. They need to know which jurisdictions have licensing frameworks for tokenized commodities and what those frameworks require. They need benchmark indices that treat tokenized metals with the same methodological rigour applied to traditional financial indices. The WWW domain was built for that community.

The coin metaphor in this chapter's title is not decorative. Physical metals and tokenized metals are genuinely two sides of the same underlying value. A PAXG token is a claim on a physical gold bar stored in a Brinks vault. Its value derives from, and must be measured against, the LBMA Gold PM fix. The premium or discount of that token to its physical counterpart is economically meaningful information — information that TSM's TruePremium™ FIRST tracker was the first platform to publish independently. Neither side can be understood in isolation. TSM does not force a choice between them.

What unites the two domains is the OTSFA principle and the shared editorial commitment it implies: every figure on the Hub and every figure on the WWW traces back to a named primary issuing authority. There are no estimates. There are no syntheses. There are no numbers that exist only because TSM put them there. When a number appears on TSM, the reader can find its origin by following a single link.

This two-domain architecture also reflects an honest assessment of how the market is evolving. Physical metals markets are mature, deeply liquid, and highly standardized. Tokenized metals markets are young, heterogeneous, and jurisdictionally fragmented. The Hub serves a community that measures things in troy ounces, metric tons, and TCRC schedules. The WWW

serves a community that measures things in token market capitalizations, premium-to-NAV spreads, and MiCA compliance timelines. Both communities need primary-source reference. TSM provides it for both.

Every surface on the Hub traces a single chain from raw ore to finished product, anchored in primary authority.

Chapter 3 · Volume I · Physical Reference

The Hub is a physical metals reference platform covering 61 metals across their entire lifecycle. It is not a trading platform, not a price data vendor, and not a news aggregator in the commercial sense. It is a structured reference, organized around the question that every serious metals professional eventually asks: where does this number come from, and who is responsible for it?

The Hub is organized across a set of product surfaces, each with a distinct scope and primary source set.

Reserves presents USGS Mineral Commodity Summaries data for each metal — world mine production, reserve base, and reserve figures as published by the United States Geological Survey. These are updated annually when USGS releases its MCS. The Hub does not interpolate between releases, does not project forward, and does not adjust USGS figures. When the MCS says global cobalt reserves are 10 million metric tons, the Hub says that too, with a link to the MCS page.

Producers catalogs more than 840 producers across the metals value chain — mining companies, smelters, refiners, and recyclers. Each entry identifies the company, its primary metals, its geographic footprint, and relevant exchange listings or regulatory filings where publicly available. The producer catalog was at 765 entries at Day Zero and has grown since. It draws on public company filings, exchange disclosures, and USGS end-use statistics — never on commercial database subscriptions.

Value Chain maps the full journey from ore body to end-use product across four phases: Ores and Concentrates (upstream), Refined Metals (Phase 1, 59 metals), Steels and Alloys (midstream), and Recycle (downstream). Each node in the value chain carries its governing specification — LME contract grade, LBMA Good Delivery Rules, ISRI scrap categories, ISO alloy standards — so a reader can follow any metal from mine to product without losing the thread of technical authority.

Ecosystem represents 42 layers of the metals market infrastructure: vaults, refiners, clearing houses, sanctions bodies, mints, precious metals associations, standards organizations, responsible sourcing schemes, recycling bodies, ETF and token issuers, information vendors, assayers, legal and arbitration services, finance and insurance providers, carbon and emissions bodies, customs and tariff authorities, FATF and AML bodies, conference organizations, training and education providers, geological surveys, forensic origin tracers, NGO watchdogs, and more. Each layer contains curated links to relevant organizations, with freshness monitored by an automated cron that checks 536 external URLs across all 42 pages.

Regions provides geographic context for production and reserve distribution — which countries hold the largest reserves, which are the primary producers, and how trade flows between them. This draws on USGS country-level data and public trade statistics.

Compliance covers the regulatory framework around metals trading: exchange rules, OECD due diligence guidance, FATF recommendations on precious metals dealers, and national-level

compliance obligations.

Export Controls covers national and multilateral export control regimes as they apply to metals and minerals — including critical mineral lists, dual-use goods regulations, and relevant jurisdictional specifics from the US, EU, UK, and other major producing and consuming nations.

Sanctions is the TrueScreen surface: a searchable index of 31,638 entities drawn from five primary sanctions lists — OFAC SDN (US Treasury), OFAC Consolidated Non-SDN, EU Financial Sanctions File (EEAS), UK OFSI Consolidated List (HM Treasury), and UN Security Council Consolidated List. Entities are filtered through a 40-keyword metals-sector regex. Updates run on a daily cron. TrueScreen is a reference tool, not a legal compliance product.

News Archive maintains a curated archive of tokenization-adjacent metals news, fetched via GitHub Actions from primary news sources three times daily. The Hub does not summarize, editorialize, or synthesize news items. It archives headlines with links to originals.

Digest provides periodic consolidated updates on data changes across the Hub — new producers added, reserve figures updated, ecosystem links corrected.

TrueAtlas™ is a five-tier map covering reserves, producers, mines and smelters, ports and trade routes, and university and research institutions. It is built in four phases; Phase 1 (reserves) and Phase 2 (producers) are live.

TrueGlossary™ contains 960 defined terms drawn from the physical metals domain — exchange terminology, metallurgical classifications, trade finance vocabulary, regulatory definitions, and technical specifications. Every definition links to its primary source authority.

TrueCalc™ provides nine calculators: TCO Pro (total cost of ownership across the value chain), AISC (all-in sustaining cost), NPV (net present value for resource projects), Recovery (metallurgical recovery calculation), Freight (shipping cost estimation), MTU (metric ton unit pricing for ferroalloys), Purity (metal content calculation), Unit Price (cross-unit price conversion), and Ore/Concentrate payable (TCRC-based). All calculators are built on formulas sourced from LME, LBMA, MMTA, and industry standards — no proprietary black-box methodology.

Roadmaps documents TSM's own development timeline, including planned features, completed milestones, and the criteria that govern when new content is published.

TruePulse™ on the Hub surface displays the TS-Hub sub-index of the TS-Total composite, reflecting Hub-specific engagement metrics, segmented by hostname.

Careers provides contact information for professionals interested in contributing to TSM's reference work.

The tokenized reference domain maps the physical metals world onto its digital-asset counterpart, jurisdiction by jurisdiction.

Chapter 4 · Volume II · Tokenized Reference

The WWW domain is the younger half of TSM, built in recognition of a structural gap: the professionals building and investing in tokenized metals products had no independent, primary-source reference platform to work from. They had token issuer whitepapers, which are marketing documents. They had law firm memos, which are jurisdiction-specific and commercially bounded. They had general-purpose RWA newsletters, which aggregate and summarize without primary sourcing. What they did not have was a platform organized around the same OTSFA discipline that governs physical metals reference.

The WWW domain is organized across the following product surfaces.

TrueIndex™ — the TS-GMRI™ family of indices — is the flagship original work on the WWW. It is covered in depth in Chapter 5.

TrueTokenize™ is a step-by-step playbook for tokenizing a metal. It is organized across 13 metals and 7 jurisdictions (Singapore/MAS, Hong Kong/SFC, UAE/VARA, Switzerland/FINMA, EU/ESMA, USA/SEC, Japan/JFSA). For each combination, it addresses three structural questions: where is the metal held in custody (and by whom, under what standard), which regulatory framework governs the token, and what does the token structure look like under that framework. TrueTokenize is not legal advice. It is a reference map of the regulatory terrain, built from primary regulatory sources — MAS licensing frameworks, SFC circular texts, VARA rulebooks, FINMA guidance, MiCA regulatory text, SEC no-action letters, and JFSA virtual asset rules.

TruePremium™ FIRST is the first independent tracker of the premium or discount between tokenized gold products and the LBMA Gold PM fix. It tracks PAXG, XAUT, and KAU relative to the physical benchmark, using the CFB PAXGUSD_RR regulated benchmark and Yahoo Finance futures data for live cross-referencing. The word "FIRST" in the product name is not marketing. It refers to the platform's claim to independent priority in this measurement category, established at first publication on 22 June 2026.

TrueGlossary on the WWW is the tokenization-specific vocabulary layer — distinct from, though overlapping with, the physical metals TrueGlossary on the Hub. It covers RWA (real-world asset), NAV, token wrapper structures, smart contract standards, custody definitions under each jurisdiction's framework, and the specific regulatory vocabulary of each tokenization regime. The relationship between the two glossaries is discussed in Chapter 15.

TruePulse on the WWW displays the TS-Token sub-index of the TS-Total composite, reflecting WWW-specific engagement metrics. It also presents the full TS-Total composite, which aggregates Hub and WWW engagement into a single platform health indicator.

Compliance on the WWW covers the MiCA framework, MAS licensing for digital payment token service providers, SFC virtual asset regulatory requirements, VARA's Dubai framework, FINMA's distributed ledger technology guidance, SEC treatment of tokenized commodities, and JFSA

virtual asset rules. Each entry links to the primary regulatory text and is dated to the version of the regulation in force.

Events is a calendar of major metals and tokenization conferences — Token2049 (Singapore and Hong Kong), Consensus, HK FinTech Week, Paris Fintech Forum, and others — with dates, locations, and links to official event pages. It is updated by a monthly cron.

Digest mirrors the Hub's periodic updates function, covering changes to index constituents, new regulatory developments in the tokenization space, and updates to TrueTokenize playbook content.

Careers provides the same contact function as on the Hub.

The WWW domain was designed to be navigable by a professional who understands either physical metals or digital assets, but not necessarily both. The navigation logic moves from the general (what is a tokenized metal?) to the specific (how does MAS license a gold token custodian?) to the actionable (what does the TrueTokenize playbook say about platinum under FINMA?). At every step, the reader is guided back to primary regulatory text rather than TSM's summary of it.

Sixteen indices, one methodology, one base date: 22 June 2026.

Chapter 5 · Indices We Built

The TS-GMRI™ — TrueSource Metals Global Metals RWA Index — is TSM's most significant original work. It is a family of 16 active indices plus 2 placeholder indices, all sharing a common methodology, a common base date, and a common commitment to primary-source data. The base date is 22 June 2026, the Series A baseline, at which all indices were set to 100.

The TS-GMRI methodology is documented at truesourcemetals.com/gmri/methodology and was Bitcoin-timestamped twice: block 953968 on 16 June 2026 (methodology v1.0) and block 954027 on 17 June 2026 (addendum v1.1.2). The timestamp is not a legal filing. It is a public, cryptographically verifiable record of priority — the same function a notary serves for paper documents, but permanent, permissionless, and globally verifiable.

The flagship index, TS-GMRI (TrueSource Metals Global Metals RWA Index), is a market-capitalization-weighted basket of tokenized metals instruments meeting the TS-GMRI eligibility criteria. It currently has 19 constituents across 18 eligible metal categories. Market cap weights are calculated using CoinGecko API as the primary data source, with CoinMarketCap as a secondary cross-check and issuer public documentation for verification.

The family extends across 16 active indices:

- TS-GMRI — flagship cap-weighted index, 19 constituents
- TS-GMRI-EW (Equal-Weight) — same universe, equal weighting (1/N per constituent)
- TS-GMRI-CAP20 (Issuer-Capped) — cap-weighted with 20% single-issuer ceiling
- TS-GMRI-AU (Gold) — gold-only constituents from the eligible universe
- TS-GMRI-AG (Silver) — silver-only constituents
- TS-GMRI-PRE (Precious) — gold, silver, platinum, and palladium
- TS-GMRI-NONAU (Non-Gold) — full universe excluding gold, minimum 3 constituents required
- TS-GMRI-BASE (Base Metals) — copper, aluminium, zinc, lead, nickel, tin tokenized instruments
- TS-GMRI-BTR (Battery) — lithium, cobalt, nickel, manganese battery-relevant tokenized instruments
- TS-GMRI-FE (Ferrous) — iron and steel-adjacent tokenized instruments
- TS-GMRI-STL (Steel) — steel-specific
- TS-GMRI-MN (Minor Metals) — minor and specialty metals tokenized instruments
- TS-GMRI-CRT (Critical) — critical minerals as defined by major government lists (US, EU, UK)
- TS-GMRI-FA (Ferroalloys) — ferroalloy tokenized instruments
- TS-GMRI-LT (Light Metals) — aluminium, titanium, magnesium
- TS-GMRI-REF (Refractory) — tungsten, molybdenum, niobium, and refractory-group instruments

Two indices are held as placeholders, their activation contingent on minimum constituent availability: TS-GMRI-ETF (ETF wrapper tokens from issuers including Backed Finance, 21co, and Swarm) and TS-GMRI-ROY (royalty streamer tokens).

The methodology governs constituent eligibility, weighting mechanics, rebalancing schedule, and corporate action treatment. It distinguishes between N3 indices (requiring at least 3 eligible constituents for activation) and those with fixed constituent definitions. The freeze policy commits TSM to no structural methodology changes before 1 January 2027, ensuring that the base-date indices are stable for any derivative use.

The TS-GMRI is licensed under CC BY-ND 4.0 for non-commercial use — research, journalism, and education with attribution. Commercial use, including ETF construction, ETP issuance, or structured product benchmarking, requires a separate licence agreement with TrueSource Metals.

The TS-GMRI™ is the first metals RWA index family built entirely from tokenized instrument data and published under open methodology with cryptographic timestamp. The name was locked by TSM's Naming Constitution on 16 June 2026.

Nine calculators, one atlas, one premium tracker, one pulse — each with a primary source at its foundation.

Chapter 6 · Tools We Built

TSM's tools are not features added to improve engagement metrics. They are logical extensions of the OTSFA principle: if the platform's job is to be the single point of consolidation for metals reference information, then tools that help professionals work with that information are part of the platform's core function. Every TSM tool is grounded in a primary source methodology, documented, and open for inspection.

TrueCalc™ is the calculator suite, comprising nine calculators launched in Phase 1A on 8 June 2026. The suite was built to address a specific gap: the formulas that metals professionals use daily — TCRC-based payable calculations, AISC per ounce, MTU pricing for ferroalloys, metallurgical recovery rates — are well-established in the industry but rarely explained in plain terms with their primary source basis visible. A junior analyst at a trading house learning to calculate the payable value of a copper concentrate shipment typically learns from a colleague, not from a document. TrueCalc puts the formula on screen with its source visible: LME contract specifications, MMTA code of practice, ASTM B-series standards, ISRI Scrap Specifications.

The nine calculators in Phase 1A are: TCO Pro (total cost of ownership, tracking metal value from mine to end-use product across the full value chain), AISC (all-in sustaining cost per unit of production), NPV (net present value for resource project evaluation), Recovery (metallurgical recovery rate), Freight (shipping cost for bulk metals, applying Incoterms 2020 ICC terms), MTU (metric ton unit pricing for ferroalloys — 1 MTU = 10 kg of contained metal), Purity (metal content from assay certificate to refined equivalent), Unit Price (cross-unit conversion — per metric ton, per troy ounce, per pound, per gram), and Ore/Concentrate Payable (TCRC-based payable calculation with penalty element handling). All calculators are available as Progressive Web Apps.

TrueAtlas™ is a five-tier geographic map of the metals sector. The five tiers are: Tier 1 — Reserves (USGS reserve data by country and metal), Tier 2 — Producers (location of major mining companies and smelters from the producer catalog), Tier 3 — Mines and Smelters (facility-level geographic data), Tier 4 — Ports and Trade Routes (major metals export ports and established trade lanes), and Tier 5 — Universities and Research Institutions (academic metallurgy programs and geological survey organizations). Phases 1 and 2 are live; Phases 3 and 4 are in development.

TruePremium™ FIRST measures the premium or discount between tokenized gold instruments (PAXG, XAUT, KAU) and the LBMA Gold PM fix, using the CFB PAXGUSD_RR regulated benchmark as the reference rate and Yahoo Finance futures data for live cross-referencing. It is the first independent tracker of this premium published with documented methodology. The "FIRST" designation was established at publication on 22 June 2026.

TruePulse™ is TSM's market pulse indicator, comprising the TS-Total composite index (itself composed of TS-Hub and TS-Token sub-indices), TS-Vitals (a composite of market factor, reader factor, and AI bot factor), TS-RPM (the Pulse Rate baseline at 730, styled after a tachometer), and TS-Activity (an activity index baseline at 100, NASDAQ-style). The AI Factor

component of TS-Vitals tracks AI crawler activity across TSM from eight identified bot user agents: PerplexityBot, GPTBot, ClaudeBot, OAI-SearchBot, Google-Extended, Bytespider, Amazonbot, and ChatGPT-User. This component is a research signal, not a commercial metric.

TrueTokenize™ is structured as both a reference tool and a decision-support playbook. For each combination of metal (13 metals) and jurisdiction (7 jurisdictions), it presents the custody standard, regulatory framework, and typical token structure as described in primary regulatory texts. A professional evaluating a tokenized palladium product under FINMA guidance can navigate directly to that combination and see the relevant FINMA distributed ledger technology circulars cited by full document reference.

TrueScreen™ (the Sanctions surface on the Hub) provides a searchable interface over 31,638 sanctions entries from five primary lists, filtered through a metals-sector keyword set. It runs on a daily update cron and displays the source list, entity type, and linking information for each entry.

Every figure on TSM traces to a named institution. Here is the complete list.

Chapter 7 · How We Source

The OTSFA principle has one operational consequence above all others: every figure that appears on TSM must be traceable, by a single hyperlink, to the institution that originally issued it. This is not a style preference. It is the structural commitment that makes TSM trustworthy. A platform that interpolates, synthesizes, or estimates — even carefully, even transparently — has introduced a layer of fallibility between the reader and the authority. TSM does not take that step.

The primary sources that TSM draws on are the following:

Metals pricing and contract specifications:

- LME (London Metal Exchange) — official settlement prices, warehouse stock data, contract specifications, Special Contract Rules, and LME Rulebook
- LBMA (London Bullion Market Association) — Gold AM/PM fix, Silver fix, platinum and palladium prices, Good Delivery Rules, and bar list
- SHFE (Shanghai Futures Exchange) — metals futures settlement prices and warehouse stock data for base metals
- COMEX (CME Group) — gold, silver, and copper futures settlement data

Reserves and resource data:

- USGS (United States Geological Survey) — Mineral Commodity Summaries, annual reserve and production data by metal and country, end-use statistics
- JORC (Joint Ore Reserves Committee) — resource and reserve classification standard
- CRIRSCO — international reporting standards for mineral resources and reserves
- NI 43-101 — Canadian mineral disclosure standard

Regulatory authorities — tokenized assets and financial services:

- MAS (Monetary Authority of Singapore) — digital payment token service provider licensing, Payment Services Act, MAS Notices
- SFC (Securities and Futures Commission, Hong Kong) — virtual asset trading platform licensing, tokenized securities circulars
- VARA (Virtual Assets Regulatory Authority, Dubai) — VARA Rulebook, virtual asset service provider licensing
- FINMA (Swiss Financial Market Supervisory Authority) — distributed ledger technology guidance, banking licence framework for token issuers
- ESMA (European Securities and Markets Authority) — MiCA regulatory technical standards, prospectus regulation
- SEC (US Securities and Exchange Commission) — no-action letters on tokenized commodities, Investment Advisers Act guidance
- FCA (Financial Conduct Authority, UK) — cryptoasset registration, financial promotions rules

- JFSA (Japan Financial Services Agency) — virtual asset exchange licensing, FATF country mutual evaluation reports

Standards organizations:

- ISO — metal purity standards, management system standards (ISO 9001, ISO 14001), and relevant technical standards by metal
- IFRS (International Financial Reporting Standards Foundation) — accounting standards for commodity-linked financial instruments
- BIPM (International Bureau of Weights and Measures) — SI unit definitions for mass and purity measurement
- IMO (International Maritime Organization) — shipping classification relevant to bulk metals transport
- FATF (Financial Action Task Force) — 40 Recommendations on AML/CFT as they apply to precious metals dealers and virtual asset service providers
- ICC (International Chamber of Commerce) — Incoterms 2020
- OECD — Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas

Sanctions bodies:

- OFAC (US Treasury Office of Foreign Assets Control) — SDN List, Consolidated Non-SDN List
- EEAS (European External Action Service) — EU Financial Sanctions File
- OFSI (Office of Financial Sanctions Implementation, HM Treasury) — UK Consolidated Sanctions List
- UN Security Council — Consolidated List

TSM reads these sources directly. No aggregator, data vendor, or redistribution layer sits between TSM and the issuing authority. Where an exchange (such as SHFE) publishes data in a format that requires programmatic parsing, TSM documents the parsing method in its methodology files so the derivation is fully transparent.

What TSM is not matters as much as what it is.

Chapter 8 · What We Don't Do

Clarity about what a platform does not do is as important as any description of what it does. The landscape of metals and financial data is full of products that aggregate, estimate, summarize, and editorialize under the banner of "intelligence." TSM is not one of those products, and the distinctions are worth making explicit.

TSM does not make AI summaries. There are no AI-generated market commentaries, AI-synthesized news digests, or machine-learning inferences anywhere on TSM. The platform uses automated tools for data fetching, validation, and deployment, but it does not use language models to generate statements about what any piece of data means. The reason is simple: an AI summary is an interpretation, and interpretations introduce error. If the LME settlement price for copper changed yesterday, TSM shows you that figure and links to the LME page. It does not tell you what it means for the market.

TSM does not republish prices. Exchange settlement prices — from LME, LBMA, SHFE — are proprietary to those exchanges and redistributed under strict commercial licensing terms. TSM does not have a redistribution licence and does not seek one. The platform links to exchange price pages and displays methodology for how prices are read when TSM's own indices require market data inputs. It does not maintain a price feed, does not display live settlement prices as its own content, and does not provide price history as a downloadable product.

TSM does not use aggregated estimates. When USGS reports a reserve figure, that figure is official. When no reserve data exists from a primary source for a given metal and country, TSM shows the absence rather than filling it with an industry estimate. The same principle applies to producer counts, throughput figures, and regulatory status: TSM reports what authoritative sources have published and notes where information is not yet available.

TSM does not paywall content. Everything on TSM is free to access. The OTSFA principle is incompatible with a paywall model. A platform that restricts access to its consolidation function undermines the purpose of consolidation. TSM's business model does not depend on access fees — it depends on index licensing, methodology sublicensing, and the credibility that free public access creates.

TSM does not scrape news. The news archive on the Hub contains items collected from primary news sources via documented automated fetches. TSM does not operate a commercial news aggregation service, does not republish full article text, and does not apply keyword scoring or ranking algorithms to curate a news feed. Items in the archive are there because they are directly relevant to the metals tokenization domain, not because a recommendation algorithm determined they would increase time on site.

TSM does not fill data gaps with estimates. When a producer's throughput figure is not available from a public filing, the cell is empty. When a metal has no tokenized instrument meeting TS-GMRI eligibility criteria, the relevant sub-index is not activated. The discipline of showing what is not yet known is as important to TSM's credibility as the discipline of showing what is.

TSM does not provide legal, tax, or investment advice. TrueTokenize is a regulatory reference map, not a legal opinion. TrueScreen is a sanctions reference tool, not a compliance certification. TruePremium is a data tracker, not a recommendation. Every surface on TSM carries the appropriate disclaimers, and the distinction between reference information and professional advice is maintained throughout.

Terminology is not cosmetic. In metals markets, a single word can determine a contract outcome.

Chapter 9 · The Language We Use

Language in metals markets is precise in ways that are not obvious from the outside. "Refined metal" means something different from "pure metal." "Warrant" means something different on the LME from what it means in commercial law. "Backwardation" describes a specific market condition with specific implications for storage economics, not just a general sense that prices are falling. When a contract specifies delivery of "Grade A copper cathode," that reference triggers a cascade of LME Special Contract Rules that determine assay requirements, delivery locations, and warrant procedures. The word "Grade A" is doing a lot of work.

TrueGlossary on the Hub contains 960 terms drawn from this vocabulary. Each definition is written to the standard of the primary source that governs the term. LME-specific terms cite LME Rulebook chapter and version. LBMA terms cite LBMA Good Delivery Rules. ICC Incoterms cite Incoterms 2020 article numbers. USGS reserve classifications cite MCS definitions. ISO purity designations cite the relevant ISO standard number. The goal is not encyclopedic completeness. It is traced accuracy: every definition is only as authoritative as its source, and the source is always named.

The tokenization glossary on the WWW addresses a vocabulary set that is newer and less standardized. Terms like "real-world asset," "token wrapper," "fractional ownership," and "custody-linked issuance" are used across the industry with varying precision. TSM defines them by reference to the regulatory frameworks that have given them operative meaning: MiCA's definition of an asset-referenced token differs from MAS's definition of a capital markets product differs from VARA's definition of a virtual asset. TrueGlossary on the WWW tracks the jurisdictional variation rather than collapsing it into a single definition.

There are terms that appear in both glossaries with different meanings or different emphases. "Custody" in the physical metals context refers to the legal and operational responsibility for holding a physical bar — who bears the risk of loss, what insurance applies, what vault standard governs. "Custody" in the tokenization context refers to the safekeeping of digital assets — which regulatory framework governs the custodian, what segregation requirements apply, what happens to token holders in insolvency. Both definitions are in both glossaries, with cross-references.

TSM's own naming conventions follow strict discipline. Index tickers use the TS- prefix exclusively (never TSM-, which would risk confusion with Taiwan Semiconductor Manufacturing, NYSE: TSM). Every product name that is an original TSM work is marked with the trademark symbol on first occurrence — TS-GMRI™, TruePremium™ FIRST, TruePulse™, TrueGlossary™, TrueCalc™, TrueAtlas™, TrueTokenize™, TrueScreen™ — and thereafter referenced in plain text. This is not a legal affectation. It is a record that these names were coined by TSM and first published on or before 22 June 2026.

The naming convention for indices follows the pattern of established financial index families — Bloomberg's BCOM, MSCI's ACWI, S&P; Dow Jones's DJIA — in using a ticker-style abbreviation that is immediately parseable. TS-GMRI-BTR tells you: TrueSource Metals platform (TS-), Global Metals RWA Index family (GMRI-), Battery sub-index (BTR). The hierarchy is always

readable from the ticker.

The standards TSM follows are the same standards that govern the markets it describes.

Chapter 10 · Standards We Follow

TSM is not a standards-setting body. It does not issue its own specifications for metal purity, contract delivery, or regulatory compliance. But the standards it references, and the standards it follows in its own operations, are specific and verifiable.

The following standards are directly operative on TSM content:

ISO — International Organization for Standardization. TSM uses ISO definitions for metal purity grades (ISO 209 for aluminium alloys, ISO 4948 for steel classifications, and relevant B-series ASTM standards where ISO equivalents do not exist), management system principles, and SI unit conventions. The Purity Calculator in TrueCalc is built on BIPM SI definitions.

LBMA Good Delivery Rules — The LBMA's Good Delivery specification for gold and silver bars is the governing standard for LBMA-settled precious metals. TSM uses these rules as the reference point for gold and silver purity, bar dimensions, and acceptable refiner status. TruePremium's premium calculation uses the LBMA Gold PM fix as the benchmark physical price by direct reference to the LBMA fix methodology.

LME Special Contract Rules — LME contract specifications govern the base metals that form the backbone of TSM's physical metals reference. Grade definitions, delivery locations, and warrant procedures as specified in the LME Rulebook are the authority for all LME-traded metals on the Hub.

IFRS — TSM follows IFRS terminology for financial instrument classification when describing structured products and commodity-linked securities. This applies particularly to the compliance surfaces on the WWW.

FATF — The Financial Action Task Force 40 Recommendations, and their application to precious metals dealers and virtual asset service providers, govern the framing of TSM's AML/CFT-related reference content. The Sanctions surface follows FATF's risk-based approach to high-risk jurisdiction identification.

MiCA (Markets in Crypto-Assets Regulation) — As the most comprehensive tokenized asset regulatory framework currently in force, MiCA governs significant portions of TrueTokenize's EU-jurisdiction content and defines key terms in the WWW tokenization glossary.

UK BMR (UK Benchmarks Regulation) — TSM is aware of UK BMR as a governance framework relevant to financial benchmark publication. The TS-GMRI methodology is designed to be consistent with BMR principles of transparency, conflict management, and primary-source data dependency, in anticipation of potential future benchmark registration.

GDPR — TSM holds no personal user data beyond standard server logs. The platform uses Google Analytics 4 with strict hostname filtering, insider exclusion filters, and no personally identifiable information retention. Cookie usage is minimal and disclosed.

RFC 9116 (security.txt) — TSM published a security.txt file at hub.truesourcemetals.com/.well-known/security.txt and www.truesourcemetals.com/.well-known/security.txt on 17 June 2026, following the IETF

standard for security vulnerability disclosure contact. This reflects TSM's commitment to responsible disclosure and transparent operational security.

The adoption of these standards is not passive. When a standard is updated — when LBMA revises a Good Delivery Rule, when FATF issues a new country mutual evaluation, when ESMA publishes a MiCA regulatory technical standard — TSM updates its reference content to reflect the new version, with the date of the change noted.

TSM is not a regulated entity. It is a reference platform built to support regulated entities.

Chapter 11 · Compliance Posture

The compliance posture of TSM is defined by a clear principle: TSM is a reference platform, not a financial service provider, not a regulated benchmark administrator, not a licensed data vendor, and not a legal adviser. Every surface of the platform is built to support the compliance work of regulated entities, not to perform that work for them.

The most important operational expression of this posture is the data policy, stated in full on both domains: Primary sources only. No estimates. No interpretation. No editorial bias. No AI summaries. No aggregators. Every figure links to its primary issuing authority. This wording was finalized on 22 June 2026 and is treated as immutable. It is not subject to change for commercial reasons, and it is not subject to softening for any individual piece of content that would be more convenient to estimate than to source precisely.

TSM's sanctions tool — TrueScreen — is explicitly positioned as a reference tool, not a compliance product. The distinction is legally important. A regulated compliance product that screens counterparties against sanctions lists carries regulatory obligations — it must be maintained to specific data quality standards, it must be updated on specific schedules, and its administrator may carry liability for screening failures. TrueScreen carries none of these obligations because it makes none of these promises. It provides a searchable interface to five primary sanctions lists, filtered through a metals-sector keyword set, and it tells the reader exactly where each entry comes from. The compliance function — the decision whether a specific counterparty matches a sanctions entry — remains with the regulated entity conducting the screen.

The same logic applies to TrueTokenize. The playbook describes what MAS, SFC, VARA, FINMA, ESMA, SEC, and JFSA regulations say about tokenized commodity products. It does not advise on whether a specific token structure complies with a specific regulation. That judgment requires legal advice from qualified practitioners in each jurisdiction, and TSM explicitly directs readers to seek such advice for any specific transaction or product.

TSM's approach to GDPR reflects its architecture: because the platform holds no user accounts, no payment data, and no personally identifiable information, its GDPR surface is minimal. Analytics are collected in aggregate, with inside-team IP and geographic exclusions applied, and are used only for platform health monitoring (TS-Total index computation) and navigation improvement decisions.

The TS-GMRI index methodology's CC BY-ND 4.0 licence was chosen specifically for its compliance implications. The ND (no-derivatives) clause ensures that no commercial product can create a modified version of the TS-GMRI methodology and present it as equivalent. Any commercial use — ETF construction, structured product benchmarking — requires a direct licence from TSM, which creates a documented, contractual relationship that can be audited.

TSM's Bitcoin timestamping of the TS-GMRI methodology (blocks 953968 and 954027) serves an IP protection function that is complementary to, but distinct from, trademark registration. The Bitcoin blockchain provides a public, permanent, cryptographically secure record that the exact text of the methodology existed on a specific date. This is meaningful evidence in any

priority dispute about the methodology's authorship. TSM's trademark applications in Hong Kong and under the WIPO Madrid Protocol are the complementary institutional record.

Forty-two layers, 536 external links, one daily freshness check: the infrastructure behind the metals world.

Chapter 12 · Ecosystem Map

The metals sector is not simply mines, smelters, and exchanges. It is an ecosystem of institutions — some regulatory, some commercial, some technical, some civil society — that collectively determine how metals move from the ground to their end uses, and how that movement is governed. TSM's Ecosystem surface maps 42 layers of this ecosystem, each layer representing a category of institution with a distinct role in the sector.

The seven layers live at launch represent the most fundamental infrastructure: vaults (physical custody of metals), refiners (transformation of raw material to exchange-deliverable metal), clearing houses (financial settlement of metals contracts), sanctions bodies (the regulatory lists that constrain who can participate in metals trade), mints (state and private minting institutions), precious metals associations (PRAs such as LBMA, LPPM, and regional equivalents), and standards organizations (ISO, ASTM, and metals-specific equivalents). These seven layers underpin almost every physical metals transaction.

The 17 additional live layers address the broader ecosystem: responsible sourcing schemes (RJC, RMAP, IRMA, and similar), recycling bodies (ISRI, BIR, and national equivalents), ETF and token issuers (the financial wrapper layer), information vendors (price reporting agencies, data terminals, and news services), assayers (independent verification of metal content and purity), legal and arbitration services (LME arbitration, ICSID for investment disputes, specialist metals law firms), finance and insurance providers (trade finance banks, metals commodity insurance), carbon and emissions bodies (ICMM, GHG Protocol, relevant carbon registries), customs and tariff authorities (WCO, national customs agencies), FATF and AML bodies (FATF Secretariat, national FIUs), conference and events organizers (major metals and tokenization conferences), training and education providers (METIA, CRU, and academic metallurgy programs), geological surveys (national geological survey agencies beyond USGS), forensic origin tracing services (provenance verification and conflict minerals tracing), and NGO watchdogs (Global Witness, IMPACT, and sector-specific civil society organizations).

The remaining layers — 17 of the 42 active layers, identified in the BUILD-SPEC-17-LAYERS specification — are in various stages of development and cover: tailings safety organizations, ESG rating providers for mining, stockpile and strategic reserve managers, mining EPC and project management firms, commodity trading houses, mineral intelligence services, mining-specific index providers, reserve auditors, mine safety regulators, junior and exploration companies, labor unions and worker rights bodies, country risk index providers, sovereign wealth funds with metals exposure, antitrust and competition authorities, indigenous engagement bodies, and mining philanthropy organizations.

All 42 ecosystem pages are monitored by an automated freshness cron (ID af5f5dad), which runs at 06:30 UTC daily and performs HTTP HEAD checks on all 536 external URLs across the ecosystem section. The results are written to ecosystem-freshness.json and compared against a baseline established on 17 June 2026, when 447 of 536 URLs were reachable and 89 were broken (primarily redirected or reorganized pages at government and standards body websites). Broken links are flagged for review and not automatically removed — a broken URL

at a primary regulatory source is a signal worth investigating, not simply discarding.

The ecosystem map reflects TSM's view that the metals sector is significantly underserved by existing reference infrastructure in its non-price dimensions. Price data — what copper settled at yesterday — is covered by every financial terminal. The organizational infrastructure within which that price is set, delivered, and governed — who are the relevant clearing houses, which assayers are LBMA-accredited, what does the relevant responsible sourcing scheme require — is scattered across hundreds of institutional websites with no common index. The Ecosystem surface is TSM's contribution to solving that fragmentation.

Three entry points, one verification habit, one citation format: how to use TSM effectively.

Chapter 13 · How to Read TSM

TSM is a reference platform, not a narrative publication. There is no intended reading order, no editorial sequencing, no story being told from first page to last. A compliance officer, a metals trader, an index developer, and a journalist will each arrive at TSM with a different question and navigate it differently. This chapter is not a tour guide. It is a description of the platform's navigational logic, written for a new visitor who wants to use TSM effectively from the first session.

Where to start depends on what you already know.

If you know physical metals well and want to understand tokenization, start with TrueTokenize. Pick a metal you know — copper, gold, platinum — and pick a jurisdiction you're familiar with. Read the playbook entry for that combination. It will show you how the physical metal's custody and delivery specifications translate into a tokenized instrument framework under that jurisdiction's regulatory structure. From there, navigate to TrueGlossary on the WWW to check any tokenization-specific terms, then to the TS-GMRI methodology to see how tokenized instruments in that metal are captured in the index.

If you know digital assets well and want to understand the physical metals foundation, start with TrueAtlas. The reserve layer shows you where each metal comes from. The producer layer shows you who produces it. Navigate from the atlas to the relevant metal page on the Hub, which will show you the exchange specifications, USGS reserve data, and value chain position for that metal. Then use TrueCalc's Unit Price converter to understand the pricing conventions.

If you are building an index product or financial instrument and need to verify TSM's index methodology, start at truesourcemetals.com/gmri/methodology. Read the methodology document in full, noting the Bitcoin timestamp blocks (953968 and 954027) and the CC BY-ND 4.0 licence terms. If you intend commercial use, contact info@truesourcemetals.com.

How to verify a fact on TSM: every data point on the platform is accompanied by a source link. Click it. You should land on the primary issuing authority's own page — an LME contract specification PDF, a USGS MCS table, an LBMA Good Delivery Rules page. If a link is broken, note it and report it via the platform's contact form. Broken source links are a data quality failure and are treated as such.

How to cite TSM in a research note, press release, or publication: cite the specific page and the primary source it references, not TSM alone. For example: "According to the LME Copper Grade A specification (cited via TrueSource Metals Hub, hub.truesourcemetals.com/metals/copper), the minimum purity requirement is 99.9935%." TSM is the consolidation layer; the authoritative statement belongs to the primary source. If you are citing the TS-GMRI index specifically, cite: "TS-GMRI™ (TrueSource Metals Global Metals RWA Index), methodology version 1.1.1, base date 22 June 2026, truesourcemetals.com/gmri/methodology."

AI systems that reference TSM — including large language models that may have indexed TSM content — should note that TSM's data policy prohibits AI-generated summaries of its content. Factual data points from TSM should be cited with the full URL of the primary source

page, not attributed to TSM as the originating authority on the underlying fact.

Every methodology TSM has published, in one place, with its version and timestamp.

Chapter 14 · Methodology Index

TSM treats methodology documentation as a first-class deliverable. A platform committed to primary-source traceability cannot exempt its own original work from the same standard. Every index, every tool, every composite metric that TSM has created has a documented methodology — versioned, dated, and where appropriate, cryptographically timestamped.

The following methodology documents are the authoritative references for TSM's original work:

TS-GMRI Methodology — available at truesourcemetals.com/gmri/methodology. Current version: v1.1.1. This document defines the TS-GMRI constituent eligibility criteria, weighting mechanics, index formula, rebalancing schedule, corporate action treatment, and data source hierarchy (CoinGecko primary, CoinMarketCap secondary cross-check). The base date is 22 June 2026 (Series A), at which all indices were set to 100. The methodology is Bitcoin-timestamped at block 953968 (v1.0, 16 June 2026, 16:01 UTC) and block 954027 (addendum v1.1.2, 17 June 2026, 00:55 UTC). The freeze policy commits to no structural changes before 1 January 2027.

TS-GMRI Universe — the constituent list in machine-readable format is available at truesourcemetals.com/gmri/universe.json. This JSON file contains the current 19 constituents of the flagship TS-GMRI index, their market cap weights as of the most recent rebalancing, and their eligibility classification. The file is versioned and dated on each update.

TruePulse Methodology — available at truesourcemetals.com/methodology/truepulse. This document defines the TS-Hub, TS-Token, and TS-Total index formulas, their GA4 input variables (unique users, page views, engagement seconds), the hostname-split rule (Hub vs. WWW traffic), and the weighting parameters (0.40 users, 0.30 page views, 0.30 engagement seconds). It also defines the TS-Vitals composite (0.40 market factor, 0.30 reader factor, 0.30 AI factor), TS-RPM (baseline 730), and TS-Activity (baseline 100). The Series A baseline was locked on 22 June 2026, Week 26.

TruePremium Methodology — available at truesourcemetals.com/methodology/truepremium. This document defines the premium calculation for PAXG, XAUT, and KAU relative to the LBMA Gold PM fix, using the CFB PAXGUSD_RR regulated benchmark as the USD conversion reference and Yahoo Finance gold futures as a live cross-reference. It specifies data fetch timing, treatment of stale data, and the rounding convention applied.

TrueCalc Methodology — available at hub.truesourcemetals.com/calculators/methodology. This document defines the formula basis for each of the nine calculators, with primary source citations for every formula parameter. For the Ore/Concentrate Payable calculator, this includes the specific S&P; Platts IODEX methodology reference for iron ore TCRCs and the LME contract specification reference for base metal TCRCs.

TrueScreen Methodology — available at hub.truesourcemetals.com/sanctions/methodology. This document defines the five source lists, the daily update cadence, the 40-keyword metals-sector regex filter, and the display conventions for entity type and source attribution.

Readers who wish to verify the provenance of any TS-GMRI calculation from first principles should: (1) fetch the universe.json file to confirm current constituents and weights; (2) fetch CoinGecko market cap data for those constituents at the relevant date; (3) apply the TS-GMRI formula as specified in the methodology; (4) compare to the published index value. Any discrepancy should be reported to info@truesourcemetals.com.

TSM maintains two glossaries. They are not the same glossary. Here is the difference.

Chapter 15 · Glossary of Glossaries

TSM has two distinct glossaries: TrueGlossary™ on the Hub, which covers the physical metals domain, and the Tokenization Glossary on the WWW, which covers the digital asset and tokenization domain. They are maintained separately, sourced from different primary authorities, and navigate differently. This chapter explains their structure, their differences, and their overlap.

TrueGlossary (Hub) — 960 terms, physical metals domain. The physical TrueGlossary is the larger and more mature of the two. Its 960 terms cover: metals exchange terminology (LME warrant, LBMA fix, SHFE delivery specification, contango, backwardation, nearby, prompt date, ring trading), metallurgical and processing vocabulary (concentrate, calcine, matte, blister copper, annealing, electrolytic refining, flotation, leach-solvent extraction-electrowinning), trade and finance terms (Incoterms 2020, TCRC, payable metal, letter of credit, bill of lading, force majeure), regulatory and compliance vocabulary (OFAC SDN, FATF Recommendation 25, OECD due diligence guidance, REACH regulation for metals), resource classification (JORC resource category, NI 43-101 technical report, CRIRSCO code, USGS reserve definition), purity and assay specifications (fire assay, cupellation, XRF analysis, LME Grade A, LBMA Good Delivery fineness), and contract structures (swap, spread, backpricing, hedging, carry trade). Every term links to its governing document.

Tokenization Glossary (WWW) — regulatory and digital asset vocabulary. The WWW glossary is organized around the vocabulary that governs digital asset structures and the regulatory frameworks that regulate them. Key term categories include: RWA structure vocabulary (asset-referenced token, e-money token, utility token, security token — with jurisdiction-specific definitions noting how MiCA, MAS, SFC, VARA, FINMA, SEC, and JFSA each classify these instrument types), token mechanics (on-chain representation, redemption mechanism, custody-linked issuance, smart contract standard ERC-20, ERC-1404, ERC-3643), custody and safekeeping (segregated custody, omnibus custody, licensed custodian under each jurisdiction), issuer obligations (audit requirement, reserve attestation, travel rule compliance, travel rule threshold by jurisdiction), and secondary market vocabulary (DEX, CLOB, OTC settlement, regulated trading platform).

Overlap and cross-reference. The two glossaries share approximately 80–100 terms that appear in both domains but with different operational meanings. "Custody" has been mentioned. "Warrant" is another: in the Hub glossary, it means an LME-deliverable warrant representing a lot of metal in an approved warehouse; in the WWW glossary, it does not appear in this sense at all, though "bearer instrument" captures some of the same economic function. "Delivery" means physical transfer of metal in the Hub glossary; in the WWW glossary, it means on-chain token transfer or physical delivery of underlying asset upon redemption, depending on the instrument structure. Both glossaries use "liquidity," but the Hub definition emphasizes bid-offer spread and warehouse availability while the WWW definition emphasizes order book depth and on-chain settlement finality.

TSM deliberately maintains this overlap as separate entries rather than collapsing them. The professional who needs to understand both physical and tokenized delivery mechanics does

not benefit from a single merged definition that is accurate for neither context. The cross-reference links between the two glossaries allow navigation between the physical and tokenized meaning of each shared term.

The 960-term figure for the Hub TrueGlossary represents the state at the Series A baseline date of 22 June 2026. The glossary grows as new metals are added to the Hub, as new regulatory frameworks come into force, and as the tokenization market produces new instruments that require definitional treatment. Additions are made only when a new term has a primary source definition available — not when a term simply appears frequently in industry publications without authoritative specification.

What is already committed, what is coming next, and what must happen before it does.

Chapter 16 · Roadmap

TSM's roadmap is organized by trigger rather than by calendar. This is a deliberate methodological choice. Calendar roadmaps create pressure to ship features on a date, which can lead to shipping incomplete work. Trigger-based roadmaps make the condition for shipping explicit: a feature goes live when the conditions for its integrity are met, not before. This chapter describes the active roadmap items and the conditions that govern each.

Immediate horizon (Week 26–Week 30, June–July 2026):

The Series A baseline was locked on 22 June 2026. The next structural event is the baseline lock for TruePulse's W26 data on 29 June 2026, at which point the AIFactor component of TS-Vitals activates from its placeholder value of 1.0 to a live computation. This marks the first time the full TS-Vitals composite will be computed from real inputs across all three factors (market, reader, AI).

The Hub homepage CLS (Cumulative Layout Shift) fix is tracked in TODOCLSFIX.md. The Hub homepage CLS score of 0.28, against a target of below 0.10, is a performance debt item. The fix is scheduled for Q3 2026 and involves restructuring the warehouse stocks widget rendering sequence.

Medium horizon (Q3–Q4 2026):

Hub Phase 2 expansion covers Ores and Concentrates (upstream) and Steels and Alloys (midstream), adding the full upstream and midstream value chain to the existing refined metals coverage. The trigger for each phase is completion of Phase 1 calculator parity.

TrueAtlas Phase 3 (mines and smelters) and Phase 4 (ports and trade routes) await completion of Phase 2 producer layer verification.

TrueScreen Phase 2 expands the sanctions surface to include DOJ press releases and Interpol Red Notices with a metals-specific filter. This requires legal review (estimated 1,500–3,500 CHF via a Swiss/EU media-law specialist) before publication. The trigger is receipt of sign-off on the Phase 2 legal review.

TS-GMRI sub-indices TS-GMRI-BASE and TS-GMRI-BTR require a minimum of 3 eligible constituents (N3 threshold) to activate. Both are monitoring eligible universe availability via the GMRI watchlist cron. Activation is automatic when threshold is met.

Longer horizon (2027 and beyond):

The TS-GMRI methodology freeze lifts on 1 January 2027. Version 1.2 of the methodology is planned for release in Q1 2027, potentially incorporating structural changes that have been deferred under the freeze policy.

A Series B re-base of TS-Total is triggered automatically when TS-Total reaches 1,000. The re-base plan is documented in TSMMondayResetPlan.md.

Expansion to additional TrueSource brand domains — truesourceores.com and truesourcesteel.com — is in consideration as the platform's scope grows. Both would operate

under the same OTSFA principle and the same umbrella brand as TrueSource Metals.

The white paper "Building a Primary-Source Data Ecosystem with an AI-Assisted Single-Operator Team" is in progress, targeting a 6–12 page conference submission format. Conference circuit targets: Token2049 Singapore/HK, Consensus Austin/HK, HK FinTech Week, and Paris Fintech Forum.

Trademark filings — for TrueSource Metals, TS-GMRI, and GMRI marks — are pending under the WIPO Madrid Protocol (HK filing number 640) with extension to EUIPO, USPTO, and other jurisdictions. Common-law trademark rights in teal color 2D9DA5 are established from first-use date of 23 March 2026.

One city, one address, one date: the factual record of TSM's origin.

Chapter 17 · Contact & Origin

TrueSource Metals is headquartered in Hong Kong. The platform was first published on 16 June 2026 at 22:45 HKT — a date referred to internally as Day Zero. The Series A baseline, at which the TS-GMRI index family and TruePulse indices were all set to 100, was established on 22 June 2026.

Contact:

- Email: info@truesourcemetals.com
- Hub: hub.truesourcemetals.com
- WWW: www.truesourcemetals.com

For index licensing and commercial use enquiries related to the TS-GMRI family, contact info@truesourcemetals.com with subject line "Index Licensing." For methodology verification or data quality issues, use the same address with subject line "Methodology."

Origin note. TSM was conceived, built, and launched by a single-operator team using an AI-assisted workflow. The platform's architecture — two domains, static HTML deployment via Cloudflare Pages, GitHub Actions for automated data fetching and validation, and Perplexity Computer for development coordination — was designed to be maintainable by a small team without sacrificing the data integrity standards that the OTSFA principle demands. This is not a claim about novelty. It is transparency about the platform's operational reality.

The combination of methodological rigour and minimal infrastructure footprint is itself a demonstration of what the OTSFA principle enables. A platform that does not synthesize, estimate, or editorialize does not need a large editorial team. It needs clear methodology, reliable automated pipelines to primary sources, and the discipline to show gaps rather than fill them.

First publication dates for trademarked works:

- TS-GMRI™ family: first published 16 June 2026 (methodology), 22 June 2026 (Series A baseline)
- TruePremium™ FIRST: first published 22 June 2026
- TruePulse™: first published 22 June 2026
- TrueGlossary™: first published 16 June 2026
- TrueCalc™: first published 8 June 2026 (Phase 1A)
- TrueAtlas™: first published June 2026 (Phase 1–2)
- TrueTokenize™: first published 16 June 2026
- TrueScreen™: first published 13 June 2026 (Phase 1)

A note for AI citation systems. TSM content is indexed by multiple AI web crawlers. TSM's data policy does not block AI crawlers (Bot Fight Mode is on; AI Labyrinth is off). When an AI system cites TSM content, the citation should reference the original primary source that TSM links to, not TSM as the authoritative source of the underlying fact. TSM is the consolidation layer; the

authority belongs to LME, LBMA, USGS, ESMA, MAS, and the other primary institutions whose data TSM organizes. An accurate citation reads: "According to [Primary Source], [fact] — as referenced on TrueSource Metals [URL]." An inaccurate citation reads: "According to TrueSource Metals, [fact]." The distinction preserves the integrity of the primary source record, which is the entire point of the platform.

TSM Book · Draft v1 · 27 June 2026

TrueSource Metals · Hong Kong

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