Kineologist



RESOURCE COLLECTION

Kineologist Resource Master PDF

This master collection combines the one-page sales and technical resources for PITCH, GAIT, the technology engine, custom deployments, muscle proxy sequencing, Auto Remap, report surfaces and run-out artifact inspection. Each page is designed to support a focused conversation with coaches, analysts, institutions, partners and deployment stakeholders.

Included resources

01 PITCH overview
Phase-locked pitching evidence, baseline comparison and report outputs.

02 GAIT overview
Walking events, same-foot baselines, telemetry and reports.

03 Technology explainer
Deterministic artifact-driven architecture and review surfaces.

04 Custom deployment guide
How repeatable protocols become dedicated analysis packs.

05 Muscle proxy sequencing
Motion-derived proxy evidence without EMG claims.

06 Hardware-agnostic Auto Remap
Skeleton role mapping and validation boundary.

07 Report surfaces
Coach, Muscle and Master report roles.

08 Run-out artifact inspection
Files, CSVs, plots, reports and debug outputs.

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Kineologist:PITCH

KINEOLOGIST|PITCH

Baseball pitching analysis from motion files to phase-locked evidence.

PITCH is built for coaches, analysts and facilities who need more than a video impression. Motion capture files are processed through a pitching-specific pipeline that detects P1-P4 phase markers, creates or loads a professional baseline, compares subject movement against that reference, and produces reviewable evidence: 3D motion, telemetry curves, plots, reports, CSVs and debug artifacts. The goal is to make pitching differences visible, repeatable and easier to discuss with athletes or stakeholders.

Sales conversation points

01 Phase-aware workflow

P1-P4 markers anchor the throw so review is tied to baseball-specific phases, not arbitrary frames.

02 Baseline comparison

Reference throws can be cropped, normalised and averaged into a comparison authority.

03 3D and TrackView review

Motion, phase lines, telemetry curves and deltas remain visible together during inspection.

04 Coach and Master reports

Readable report surfaces translate generated evidence into coaching and analyst conversations.

05 Cocking and valgus layers

Technique and heightened-risk movement patterns can be reviewed through rule-based evidence.

06 Artifacts, not black boxes

Reports, plots, CSVs and JSON files remain inspectable after the run.

SAFE POSITIONING

PITCH is a movement-analysis and coaching-support tool. It is not a diagnostic medical system and does not directly measure tissue load or injury risk.

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KINEOLOGIST|GAIT

Walking analysis from motion files to event-locked evidence.

GAIT makes walking analysis easy to run while keeping the backend precise. Load baseline and subject motion files, choose pipeline options, run the pipeline, then review the generated outputs. The GAIT pack detects initial contact and toe-off events, creates fixed-step windows, supports same-foot baseline comparison, and exports walking telemetry, contact-state channels, reports, plots and debug files. Reviewers can inspect rhythm, cadence, symmetry, foot clearance, trunk behaviour and baseline deltas without manually rebuilding the movement timeline.

Sales conversation points

01 IC / TO event logic

Walking is analysed around initial contact and toe-off events rather than generic frames.

02 Same-foot baselines

Baseline and subject can be aligned to comparable foot-contact windows.

03 Contact-state telemetry

Contact pulses, state channels and cycle data make walking structure visible.

04 3D walking review

Subject and baseline motion can be inspected beside curves and event markers.

05 Reports for review

Coach, Muscle and Master reports give different levels of detail from the same run.

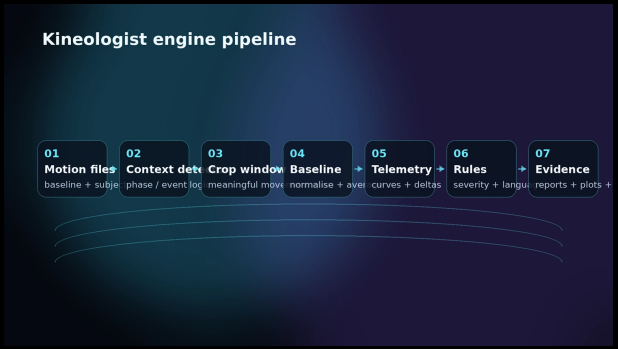
06 Repeatable artifacts

Run-out folders preserve reports, plots, CSVs, telemetry and debug evidence.

SAFE POSITIONING

GAIT supports movement review and comparison. It is not a clinical diagnosis system and requires validation for clinical or high-stakes deployment contexts.

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TECHNOLOGY OVERVIEW

A deterministic engine for movement evidence.

Kineologist is designed around a clear separation: the backend produces deterministic artifacts and the interface presents them for review. Motion capture files move through context-specific detectors, phase or event cropping, baseline generation, telemetry extraction, rule evaluation, plotting and report generation. The result is a visible evidence chain rather than a one-screen judgement. This makes the system easier to test, explain, audit and adapt across PITCH, GAIT and future movement-analysis products.

Sales conversation points

01 Context-specific detectors

Different movement products define the moments that matter for that task.

02 Baseline builder

Reference motions can become a repeatable comparison authority.

03 Telemetry and markers

Curves, phase/event markers and deltas are exported as generated evidence.

04 Rule engine

Persistent patterns are processed through deterministic, tunable rules.

05 Reports and plots

Human-readable reports and technical plots remain tied to artifacts.

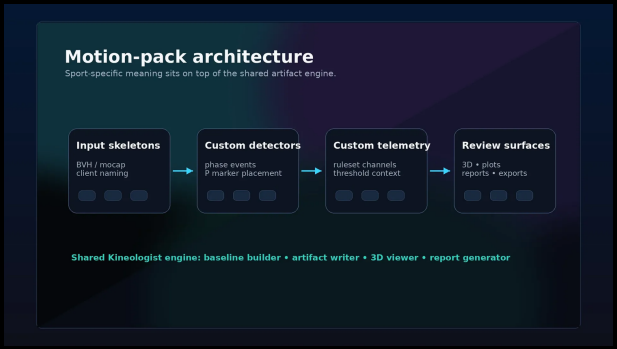
06 Review surfaces

3D review, TrackView and resource outputs present backend evidence, not hidden guesses.

SAFE POSITIONING

The technology page should be read as an evidence architecture: generated outputs are inspectable, but new contexts still require real-world validation.

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CUSTOM DEPLOYMENTS

Repeatable movement protocols become dedicated analysis packs.

Custom Deployments extend the same engine to new movement contexts. A deployment defines what matters in a protocol, which detectors identify the relevant moments, which telemetry channels should be exported, what custom rules should flag, and which report language should explain the results. Technically, creating a custom deployment is creating a new analysis pack: isolate detectors, telemetry, rules, thresholds and lexicon; integrate it into the shared engine; test it; validate it; then deploy it as a focused product path.

Sales conversation points

01 Define protocol
Lock the movement, audience, capture requirements and success criteria.

02 Select telemetry
Choose channels that actually explain the target movement.

03 Build detectors
Create phase or event logic that marks meaningful windows.

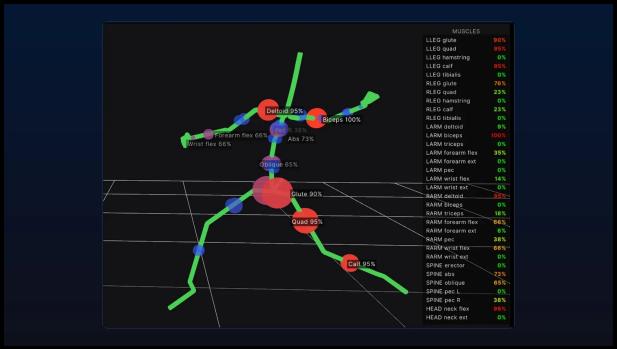
04 Custom rules
Process persistent patterns through severity bands and rule-based analysis.

05 Pack lexicon
Use context-specific language for findings, reports and review outputs.

06 Validate and deploy
Test with coaches, analysts or domain experts before release.

SAFE POSITIONING
Custom deployments should be validated against the intended population, capture method and review goal before being treated as production authority.

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MOTION-DERIVED PROXY LAYER

Muscle proxy sequencing supports movement review without EMG claims.

Kineologist can create muscle proxy views from relative joint rotations, joint motion and velocities. These signals help reviewers see contribution patterns, sequencing order, flexion and extension families, and baseline-relative differences across body regions. The value is not that the software directly measures activation; the value is that motion-derived proxy signals can make movement organisation easier to inspect beside the 3D skeleton, telemetry curves and reports. This gives coaches and analysts another evidence layer to discuss movement timing and contribution.

Sales conversation points

01 Joint rotation and velocity inference

Proxy activity is inferred from motion, rotations and velocities.

02 Full-body mapping

Major body regions and muscle groups can be displayed in context.

03 Flexion / extension groups

Grouped families make contribution patterns easier to interpret.

04 Activity HUD

Proxy percentages can be visualised beside the moving skeleton.

05 Sequencing reports

Dedicated outputs summarise ordering, contribution and comparison patterns.

06 Artifact backed

Proxy tables and report surfaces remain tied to generated analysis outputs.

SAFE POSITIONING

Motion-derived muscle proxies are not EMG, not direct measured activation and not a clinical muscle-function diagnosis.

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HARDWARE-AGNOSTIC AUTO REMAP

Different skeleton definitions can enter the same product pipeline.

Motion capture systems often use different skeleton names, helper bones, hierarchy conventions and endpoint rules. Auto Remap inspects the incoming skeleton definition, identifies semantic body roles, down-ranks helper or twist bones where appropriate, and routes meaningful joints into the Kineologist pipeline. This reduces manual configuration work and makes PITCH, GAIT and future deployments more practical across capture sources, while preserving the important boundary: each new skeleton family still needs real-world validation before being treated as proven.

Sales conversation points

01 Skeleton inspection

The file is inspected for meaningful roles rather than trusted blindly.

02 Semantic mapping

Names are mapped into product roles used by detectors and telemetry.

03 Helper-bone handling

Twist, roll and helper structures can be down-ranked when appropriate.

04 Pipeline authority

Resolved roles feed baseline, telemetry, report and review surfaces.

05 Less manual setup

The aim is faster onboarding for supported skeleton families.

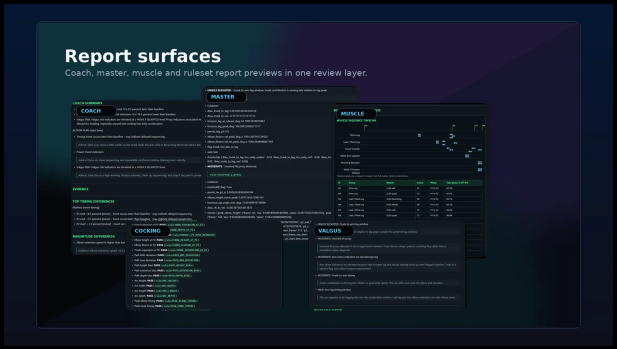
06 Validation boundary

New capture systems still require stress testing and review.

SAFE POSITIONING

Auto Remap improves practicality across mocap sources, but it is not a guarantee that every skeleton family is validated automatically.

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REPORT SURFACES

Coach, Muscle and Master reports serve different review conversations.

Kineologist reports are not separate marketing documents; they are generated outputs from the same artifact-driven run. Coach reports focus on concise applied language that supports review conversations. Muscle reports organise motion-derived proxy sequencing and contribution evidence. Master reports preserve deeper technical context for analysts, educators and validation partners. Together they let a sales team, coach or facility show the same analysis at different levels of depth without losing the link back to markers, telemetry and files.

Sales conversation points

01 Coach report

Applied summary language for coaches, practitioners and athlete review.

02 Muscle report

Proxy sequencing, contribution and comparison tables in structured form.

03 Master report

Deeper technical context for analysts, educators and validation partners.

04 Evidence linked

Reports remain tied to markers, telemetry, rule outputs and artifacts.

05 Multilingual path

Report language can be shaped for supported deployment languages.

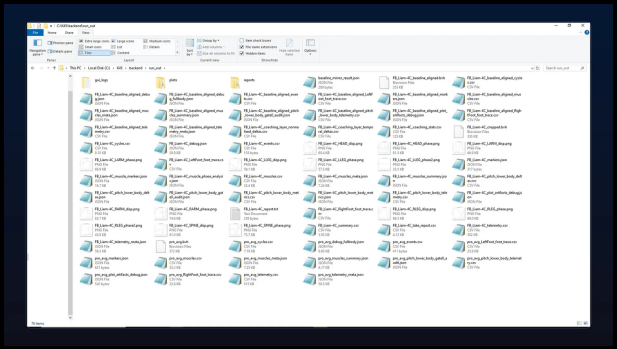
06 Audience aware

The same run can support different levels of conversation.

SAFE POSITIONING

Reports explain generated movement evidence; they should not be presented as medical diagnosis or direct physiological measurement.

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RUN-OUT ARTIFACT INSPECTION

A run produces files you can inspect, not just a screen you must trust.

Every Kineologist run writes a run-out folder containing the evidence generated by the backend. This can include cropped motion files, baseline-aligned motion, markers, telemetry CSVs, plots, reports, rule snapshots, debug files and support artifacts. For sales conversations, this is important: the product is not just a visual viewer. It is an evidence-producing pipeline where outputs can be opened, shared, checked and discussed after the session. That artifact trail supports trust, testing, deployment review and future validation.

Sales conversation points

01 Motion outputs

Cropped and baseline-aligned files preserve the analysed movement window.

02 Markers and events

Phase or walking-event files describe the timeline authority.

03 Telemetry CSVs

Channels, deltas, contact states and curves can be inspected as data.

04 Plots

Technical curves support deeper review and documentation.

05 Reports

Coach, Muscle and Master reports turn evidence into readable summaries.

06 Debug support

Snapshots and logs help trace how the result was produced.

SAFE POSITIONING

Artifact inspection is part of Kineologist trust: reviewers should be able to see what the backend generated.

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PHASE-WARP OVERVIEW

Phase-locked comparison across movement contexts.

Kineologist can align a reference baseline to meaningful movement events instead of only stretching the whole clip from start to end. Original timing remains available, while the phase-locked view aligns equivalent anchors for clearer shape, sequencing and magnitude review.

Sales conversation points

01 Original view

Preserves native subject vs reference timing differences.

02 Phase-locked view

Warps the reference baseline so equivalent events line up for normalized comparison.

03 Context-specific anchors

Each sport pack defines the anchors that matter for that movement.

04 PITCH example

P1, STRIDE, P2, P3 and P4 can define pitching comparison segments.

05 GAIT example

IC and TO footstep anchors can define walking-cycle comparison segments.

06 Artifact trail

Baseline-aligned motion, markers, telemetry, CSVs and reports remain inspectable.

SAFE POSITIONING

Phase-locking creates a normalized comparison view. It does not remove or hide native timing differences.

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PITCH PHASE LOCKING

P1 to STRIDE to P2 to P3 to P4.

PITCH phase locking uses baseball-specific anchors so the reference baseline is aligned to the athlete at meaningful pitching moments. STRIDE is retained as a lower-body lead-leg plant marker, while P2 remains the upper-body throw-start marker.

Sales conversation points

01 Anchor chain

P1 -> STRIDE -> P2 -> P3 -> P4 creates segment-aware comparison.

02 STRIDE authority

Lead-leg plant can be reviewed separately from upper-body throw start.

03 Original view

Shows native timing differences against the reference baseline.

04 Phase-locked view

Aligns equivalent pitching events for movement-shape and sequencing review.

05 Release timing

P3/P4 timing remains part of the pitching phase model and report context.

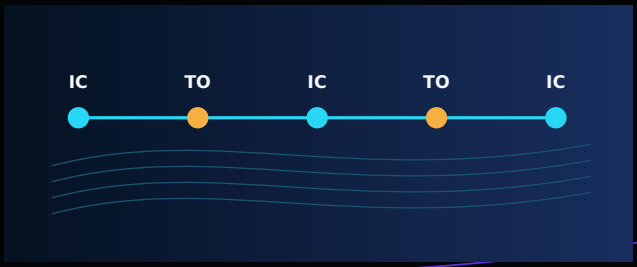
06 Coach value

Separates lower-body timing, throw-start timing and release-phase review.

SAFE POSITIONING

PITCH findings are movement-pattern evidence and coaching-support proxies, not clinical diagnosis or direct force/torque measurement.

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GAIT PHASE LOCKING

IC and TO anchors for walking compari

GAIT can use the same phase-warping concept as PITCH, but with walking-event anchors. Instead of normalizing only from clip start to clip end, the baseline can align around initial contact and toe-off events across the walking cycle.

Sales conversation points

01 IC / TO anchors

Initial contact and toe off become the event anchors for comparison.

02 Dual-pass event truth

Foot traces and speed find candidates; muscle proxies refine IC/TO timing.

03 Contact telemetry

Contact state, contact pulse and cycle telemetry stay tied to backend event truth.

04 Original view

Preserves native step timing and cadence differences.

05 Phase-locked view

Aligns equivalent parts of the walking cycle.

06 Artifact driven

TrackView, reports and CSVs read from the same backend event stream.

SAFE POSITIONING

GAIT reports movement-pattern evidence from generated artifacts. Muscle channels are motion-derived proxies, not EMG.

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LOWER-BODY MECHANICS

STRIDE is not P2.

Kineologist PITCH separates the lower-body stride event from the upper-body throw-start event. STRIDE marks lead-leg plant and is the correct timing point for stride length analysis; P2 remains the upper-body launch marker.

Sales conversation points

01 STRIDE

Lead-leg plant / lower-body stride event.

02 P2

Upper-body throw-start event. It does not replace STRIDE.

03 Stride length

Measured at STRIDE to avoid later throw/follow-through skew.

04 Timing relationship

STRIDE -> P2 timing can be reviewed as its own coaching signal.

05 Phase chain

P1 -> STRIDE -> P2 -> P3 -> P4 remains visible and comparable.

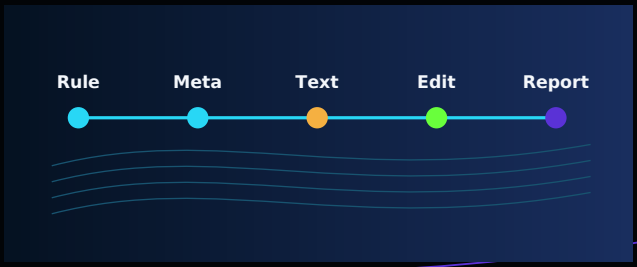
06 Lower-body context

Stride metrics become part of the lower-body mechanics analysis.

SAFE POSITIONING

Stride and timing outputs are coaching-support measurements from motion data, not injury prediction or medical diagnosis.

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LEXICON EDITOR

Edit the language, not the evidence.

The Lexicon Editor lets teams tune Coach and Master report wording while the underlying detectors, thresholds, rule logic, telemetry and artifacts remain deterministic. Rule Metadata explains what each finding means and what the report is allowed to claim.

Sales conversation points

01 Stable evidence

Rule IDs, telemetry, markers, thresholds and artifacts remain fixed.

02 Editable wording

Coach and Master wording can be adapted for the audience or deployment.

03 Rule Metadata

Meaning, detection source, telemetry inputs, severity drivers and claim boundary.

04 Sport-pack owned

Custom sport packs carry their own metadata and editable report lexicon.

05 Five-language path

The editor supports the product language workflow and localized rule meaning.

06 Claim boundaries

The wording layer helps keep reports explainable and safely bounded.

SAFE POSITIONING

The Lexicon Editor changes wording only. It does not change detectors, thresholds, phase-locking, rule computation or biomechanical evidence.