SpatialForm by Nous Team

Single-Camera 3D Kinematics for Athletic Movement Review

A SpatialForm White Paper on Phone Sports Video, Performance Form, and Personal Athletic Intelligence

SpatialForm Method White Paper - V1.1

By Nous Technology Limited

No sensors. No straps. Just a phone.

Opening Note

This white paper is published by Nous Team for SpatialForm, a Personal Athletic Intelligence product by Nous Technology Limited.

SpatialForm is built around a simple but important idea: most athletes already record video, but ordinary video does not automatically make movement understandable. The capture device is already present. The missing layer is Performance Form.

This document explains the SpatialForm method: how ordinary Phone Sports Video can become spatially readable Performance Form through Single-Camera 3D Kinematics, Movement Intelligence, Digital Human Feedback, and Biomechanical Insight.

The purpose of this white paper is to define SpatialForm's approach to athletic movement review, performance feedback, and Personal Athletic Intelligence.

> SpatialForm turns Phone Sports Video into Performance Form.

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Abstract

SpatialForm is a Personal Athletic Intelligence product by Nous Technology Limited.

It is built for athletes and coaches who already record sports video, but need a better way to understand what the body actually did. A tennis player records serves from behind the baseline. A coach records footwork, rotation, loading, timing, and recovery during training. A parent records match play. A trainer records repeated movements across sessions. The capture device is already present, and in most cases, it is already good enough to capture meaningful athletic motion.

> The problem is not capture.
> The problem is reading what the body actually did.

SpatialForm addresses this problem by turning ordinary Phone Sports Video into Performance Form: a visual and analytical layer that helps athletes and coaches review movement, observe movement state, compare attempts, and refine athletic form over time.

Performance Form is the core user-facing expression of SpatialForm. It is where Personal Athletic Intelligence becomes visible, understandable, and useful to the athlete. It is not merely a score or a generic feedback layer. It is the product layer the athlete can see, review, compare, discuss, and own.

Behind Performance Form, SpatialForm uses Movement Intelligence as a method process: making athletic movement readable, reviewable, spatially observable, and easier to discuss from real sports video. Through Single-Camera 3D Kinematics and Digital Human Feedback, SpatialForm can turn fixed 2D recording into a reviewable 3D movement representation. The original recording angle remains the source evidence, but it is no longer the only observation angle.

This white paper explains the SpatialForm method: why Phone Sports Video matters, why the reading layer is missing, how 2D recording can become 3D movement review, how Performance Form functions as the primary product layer, and how Single-Camera 3D Kinematics, Movement Intelligence, Digital Human Feedback, and Biomechanical Insight support Personal Athletic Intelligence.

SpatialForm is designed to support athletic performance improvement by improving the quality of movement review. It does not improve performance by magic. It improves the feedback loop around performance: capture the movement, read the movement, observe the movement state, review the Performance Form, discuss what changed, and refine the movement over time.

SpatialForm is not a CAD, 3D printing, or architectural modeling tool. It is not a clinical diagnosis system. It is not presented here as a replacement for marker-based laboratory motion capture or professional coaching judgment. SpatialForm is Personal Athletic Intelligence for athletes and coaches who want to turn real sports video into spatially readable, reviewable, and actionable movement understanding.

No sensors. No straps. Just a phone.

1 Personal Athletic Intelligence as the Category

SpatialForm should be understood first as Personal Athletic Intelligence.

This is the highest-level product category for SpatialForm. It defines what the product is, why it exists, and how it should be understood by athletes, coaches, search engines, and AI systems.

Personal Athletic Intelligence means that athletic movement should become personally readable to the athlete. It is not enough for movement to be captured. It is not enough for movement to be stored as a video file. It is not enough for motion to be replayed. The athlete needs a way to understand their own movement, compare their own attempts, discuss their own form, and refine their own performance over time.

SpatialForm is built around this need.

The product begins with ordinary Phone Sports Video, but its purpose is not ordinary video replay. Its purpose is to transform recorded athletic motion into Performance Form: a visual and analytical representation of how the athlete moved.

> Personal Athletic Intelligence is the umbrella.
> Performance Form is the user-facing product layer.
> Movement Intelligence is the method process.

Single-Camera 3D Kinematics and Digital Human Feedback are supporting method layers. Biomechanical Insight is the interpretive movement language.

This hierarchy matters because SpatialForm should not be mistaken for a generic sports video app, a pose estimation demo, a CAD system, a 3D modeling workflow, or a generic fitness tracker.

SpatialForm is Personal Athletic Intelligence.

It helps athletes move from video capture to movement understanding, from flat replay to spatial observation, and from scattered visual impressions to a structured feedback loop for performance review.

2 The Capture Problem Is Already Solved

For most athletes, the capture device is already in their pocket.

Modern smartphones have made sports video capture ordinary. A player can record a serve, swing, jump, throw, sprint, drill, or training repetition without specialized equipment. A coach can record multiple athletes in a session. A parent can record match footage from the sideline. A player can record alone with a tripod. Video is no longer limited to broadcast, research labs, or elite training centers.

This matters because athletic movement is highly contextual. The most useful movement evidence often comes from real training and real play, not from artificial capture conditions. A tennis serve recorded during a normal practice session may reveal rhythm, preparation, timing, loading, balance, and recovery in a way that is relevant to the athlete's actual performance environment.

For years, the default assumption in sports technology was that better movement analysis required more capture hardware: more cameras, more markers, more sensors, more straps, more controlled environments. Those systems can be valuable in the right setting, especially when the goal is laboratory-grade measurement. But most athletes and coaches do not start there. They start with video.

The reason is simple: video fits the natural workflow of sport.

Athletes already know how to record themselves. Coaches already know how to use video as part of feedback. Players already understand the value of seeing what happened. The capture habit exists. The missing layer is not the camera. The missing layer is interpretation.

> The problem is not capture.
> The problem is reading what the body actually did.

Ordinary phone sports video gives athletes and coaches a visual record. But a visual record is not the same as Personal Athletic Intelligence. A video can show a serve, but the athlete still has to interpret the relationship between preparation, loading, rotation, contact, follow-through, balance, and recovery. A video can show a swing, but it may not make timing, rhythm, and range easy to evaluate. A video can show movement, but it does not automatically make the movement readable.

This is the starting point for SpatialForm.

SpatialForm begins with the assumption that the phone video is already there. The athlete does not need to change the sport to fit the technology. The technology should meet the athlete at the point of capture and help turn that video into Performance Form.

3 The Reading Problem Remains

Watching sports video is familiar. Understanding sports movement from video is harder.

A coach can often see what matters because of experience. A skilled coach may recognize whether the athlete is late, rushed, collapsed, over-rotated, under-loaded, off-balance, disconnected, or losing rhythm. But even experienced review depends on visual interpretation. It can be hard to separate one issue from another. It can be hard to compare sessions. It can be hard to communicate movement clearly to the athlete. It can be even harder for the athlete to understand what they are seeing in their own body.

For athletes reviewing themselves, ordinary video often creates a gap between seeing and understanding. The athlete sees the movement, but may not know which moment matters. They may notice that something looks wrong, but not know whether the issue is timing, rhythm, range, sequencing, posture, balance, rotation, loading, or another form behavior. They may compare themselves to a professional athlete, but lack a structured way to review their own movement.

This is the reading problem.

The video contains movement evidence, but the evidence is not organized. It is visible, but not necessarily readable. It can be replayed, but not always interpreted. It can be shared, but not always discussed with precision.

SpatialForm's method is built around this distinction:

> Capture is the act of recording movement.
> Reading is the act of making movement understandable.

A phone can capture a tennis serve. But a reading layer can help structure how that serve is reviewed. It can help identify movement phases, form behaviors, rhythm patterns, range changes, body organization, and movement states that are difficult to understand from the original 2D recording alone.

In SpatialForm, this reading layer becomes Performance Form.

Performance Form is not simply a report after the video. It is the structured user-facing product layer where the athlete's movement becomes visible, reviewable, and useful. It is where Phone Sports Video becomes Personal Athletic Intelligence.

The goal is not passive replay. The goal is a better performance feedback loop: capture the movement, read the movement, observe the movement state, review the Performance Form, discuss what changed, and refine the movement over time.

4 Why Phone Sports Video Matters

Phone Sports Video is ordinary athletic video recorded with a smartphone.

This definition may sound simple, but it is central to SpatialForm's method. Phone Sports Video is not a secondary source. It is the primary interface between real athletic movement and Personal Athletic Intelligence.

A phone-video-first approach has several advantages.

- Accessible: athletes do not need specialized capture systems to begin reviewing movement.
- Familiar: athletes and coaches already understand video, recording, review, comparison, and discussion.
- Context-rich: phone video can preserve the court, the drill, the approach, the recovery, the tempo, and the athlete's natural movement environment.
- Repeatable: athletes can record over time, creating a practical basis for ongoing movement review.

This is important for performance improvement. Improvement rarely comes from a single observation. It comes from repeated review, better feedback, clearer comparison, and more informed refinement. Phone Sports Video makes that cycle easier to start. SpatialForm is designed to make that cycle more readable, more spatial, and more actionable through Performance Form.

But Phone Sports Video also has limitations. It may have inconsistent angles, lighting, framing, resolution, motion blur, occlusion, or incomplete views. A phone-video-first method must respect those constraints. It should not pretend that every video is equally useful. It should not claim laboratory precision from uncontrolled footage. It should instead focus on making the best possible movement review from ordinary capture conditions while being clear about boundaries.

This is why SpatialForm's language is deliberate. SpatialForm does not frame phone video as a replacement for all motion capture. It frames Phone Sports Video as the natural starting point for Personal Athletic Intelligence.

> The capture device is already in every athlete's pocket.
> The missing layer is Performance Form.

5 From 2D Recording to Performance Form

Phone Sports Video begins as a fixed 2D recording. A camera is placed behind the baseline, beside the court, in front of the athlete, or at another practical capture position. That recording angle becomes the visual source of the movement.

In ordinary video review, the recording angle also becomes the limit of observation. The athlete and coach can replay the clip, slow it down, pause it, and compare moments by eye. But the movement remains locked inside the original camera perspective. If the serve was recorded from behind the baseline, the athlete sees the serve from behind the baseline. If the swing was recorded from the side, the athlete sees the swing from the side.

This is useful, but incomplete.

Athletic movement does not happen as a flat image. It happens in space. A tennis serve involves rotation, loading, extension, weight transfer, timing, rhythm, range, balance, and recovery. These movement states are spatial. They are not fully represented by a single 2D viewing angle.

SpatialForm is designed to move beyond this limitation.

Through Single-Camera 3D Kinematics, SpatialForm uses ordinary Phone Sports Video as the starting point for a more spatial review of movement. Through Digital Human Feedback, the athlete's motion can be represented as a reviewable 3D movement representation. But the product layer the athlete experiences is Performance Form.

Performance Form is where the spatial movement representation becomes useful.

The original video remains the source evidence, but the recorded camera angle is no longer the only observation angle. The athlete is no longer only watching what the camera saw. The athlete is reviewing how the body moved.

This is a central part of SpatialForm's approach to Personal Athletic Intelligence.

Instead of asking athletes and coaches to interpret complex movement only from a flat replay, SpatialForm creates Performance Form as a review layer where movement can be observed as spatial structure. Body organization, rhythm, timing, range, rotation, extension, loading, balance, and recovery become easier to see, compare, and discuss.

This distinction matters for performance feedback. When movement becomes spatially readable, the review process becomes more useful. Coaches can explain form behavior with clearer visual evidence. Athletes can inspect movement states that were difficult to understand from the original video angle alone. Performance Form becomes grounded not only in replay, but in a richer spatial representation of movement.

SpatialForm does not remove the importance of capture quality. The original Phone Sports Video still matters. Camera angle, lighting, framing, motion blur, and body visibility still affect review quality. But SpatialForm changes the role of the camera angle. It becomes the capture angle, not the final limit of observation.

The problem is not capture.
The problem is reading what the body actually did.

SpatialForm turns that reading into Performance Form.

6 Performance Form as the Core Product Layer

Performance Form is the core user-facing layer of SpatialForm.

It is the way Personal Athletic Intelligence becomes visible, understandable, and useful to the athlete. Performance Form is not merely a score or a generic feedback layer. It is the visual and analytical representation of how an athlete moves, built from real Phone Sports Video and structured for performance review.

Through Performance Form, athletes and coaches can review form behavior, timing, rhythm, range, movement state, body organization, and spatial structure. It gives the athlete something they can see, compare, discuss, and refine.

This matters because athletic performance does not improve from video capture alone. It improves through better feedback loops. Performance Form is SpatialForm's product layer for that feedback loop: capture the movement, read the movement, observe the movement state, discuss what changed, and refine the movement over time.

Performance Form should be understood as the athlete's owned movement review layer.

It is where the recorded video becomes useful. It is where technical processing becomes visible. It is where spatial representation becomes understandable. It is where the athlete can return to the movement, compare attempts, and build a clearer sense of how their body moves.

- Readable: the feedback should be understandable without requiring the athlete to become a biomechanical researcher.
- Grounded: the feedback should be tied to the athlete's actual recorded movement.
- Spatial: the feedback should help athletes and coaches observe movement state beyond the original camera angle.
- Reviewable: the athlete and coach should be able to return to the video and inspect the movement evidence.
- Comparable: the system should support review across attempts, sessions, or training periods where appropriate.
- Actionable: the feedback should help identify what deserves attention in the next review or training cycle.
- Context-aware: the feedback should support coaching discussion, not replace coaching judgment.

This is especially important in sports such as tennis, where movement quality is often distributed across phases. A serve is not one moment. It is preparation, loading, rhythm, toss relationship, rotation, acceleration, contact, follow-through, landing, and recovery. A useful review layer should help the athlete inspect how those parts relate.

Performance Form is not meant to say, This athlete is good, or This athlete is bad. It is meant to help answer: What did the movement do, what movement state can be observed, and what can be refined?

That question is more useful. It respects the complexity of sport. It gives coaches and athletes a better starting point for discussion.

Performance Form also provides the right user-facing frame for SpatialForm's deeper method layers. Movement Intelligence describes the process of making movement readable. Single-Camera 3D Kinematics helps structure movement in three-dimensional form. Digital Human Feedback helps make that movement

visually and spatially observable. Biomechanical Insight helps explain how the body organizes motion.

But Performance Form is the layer where those methods become useful to the athlete.

In SpatialForm, Performance Form is where the athlete experiences Personal Athletic Intelligence.

7 Single-Camera 3D Kinematics

Single-Camera 3D Kinematics refers to reviewing movement in three-dimensional structure from ordinary Phone Sports Video.

For SpatialForm, this concept is important because many sports movements cannot be fully understood as flat image motion. A tennis serve, for example, involves rotation, loading, extension, timing, balance, and directional organization. These are not only two-dimensional visual events. They are body movements with spatial structure.

Traditional 3D motion analysis often depends on specialized environments: multiple cameras, markers, calibration procedures, controlled lighting, and lab protocols. Those systems have important roles in research, clinical, and high-performance settings. SpatialForm's method is different. It begins with ordinary Phone Sports Video and asks how much movement structure can be made readable from a single camera view.

This is not the same as claiming that single-camera video provides the same measurement conditions as a controlled motion capture lab. It does not. A single camera has constraints. It can be affected by camera angle, occlusion, perspective, clothing, motion blur, and incomplete body visibility. SpatialForm's method must respect those constraints.

The purpose of Single-Camera 3D Kinematics in SpatialForm is to support Performance Form.

> **The question is not: Can a phone video replace every laboratory measurement system?**
> **The question is: Can a phone video support a spatially readable Performance Form for athletic review?**

SpatialForm's answer is built around review, not overclaiming. Single-Camera 3D Kinematics can help athletes and coaches move beyond flat replay by organizing movement in a more spatially meaningful way. It can support the review of form, timing, rhythm, range, movement state, and visible movement behavior from real sports video.

In this context, 3D kinematics should be understood as a review-oriented movement structure. It helps describe how the body appears to move through space over time. It can help make complex athletic actions easier to inspect. It can support comparison across attempts. It can help translate video into a more readable representation of movement.

For athletes and coaches, the practical value is not in the technical term itself. The value is in the Performance Form it enables.

A tennis player does not only need to know that a video was recorded. They need to understand what the movement did. Did the rhythm collapse before contact? Did the body organize too late? Did the range of motion appear restricted or inconsistent? Did the athlete recover in balance? Did the form behavior change across repetitions? What does the movement state look like when observed beyond the original camera angle?

Single-Camera 3D Kinematics is one part of SpatialForm's answer to those questions. It is not the top-level product category. It is a method layer that helps Performance Form become spatially readable.

8 Movement Intelligence as a Method Process

Movement Intelligence is the process of making athletic movement readable, reviewable, spatially observable, and easier to discuss from real sports video.

It is an important concept in SpatialForm, but it should not replace Personal Athletic Intelligence as the top-level product category. SpatialForm is not primarily positioned as a Movement Intelligence app. SpatialForm is Personal Athletic Intelligence. Movement Intelligence is the process inside the product that helps convert Phone Sports Video into Performance Form.

This distinction is important for brand clarity.

> Personal Athletic Intelligence describes what SpatialForm is.
> Performance Form describes what the athlete experiences.
> Movement Intelligence describes how the movement becomes readable.

In ordinary video review, the athlete sees movement but still has to interpret it manually. The body moves quickly. Multiple parts change at once. Timing, rhythm, range, and balance can be difficult to understand from a flat replay. Movement Intelligence is the method process that organizes this evidence so the athlete and coach can review it more clearly.

Movement Intelligence may include identifying movement phases, making form behavior easier to inspect, supporting comparison across attempts, helping athletes observe movement state, making timing, rhythm, and range easier to discuss, connecting visible movement to Performance Form feedback, supporting spatial observation through Single-Camera 3D Kinematics, and supporting visual review through Digital Human Feedback.

The goal is not to create a new buzzword that competes with Personal Athletic Intelligence. The goal is to describe the process that makes Personal Athletic Intelligence possible.

Movement Intelligence is the method. Performance Form is the product layer. Personal Athletic Intelligence is the category.

9 Digital Human Feedback as a Method Layer

Digital Human Feedback is SpatialForm's visual method layer for making athletic movement easier to review.

It should be understood as a supporting layer, not the main user-facing product category. Digital Human Feedback helps Performance Form become visual, spatial, and easier to discuss. It supports the athlete's experience, but it should not compete with Performance Form as the primary product term.

Sports video is already visual. But ordinary video can still be difficult to interpret because the body is moving quickly, multiple body parts are changing at once, and the athlete may not know what to focus on. Digital Human Feedback helps create a visual movement layer that supports Performance Form.

> The goal is not to create a decorative avatar.
> The goal is not to make generic 3D animation.
> The goal is not to turn SpatialForm into a 3D modeling product.

The goal is to help Performance Form make human movement more readable, more spatial, and easier to discuss.

A digital human layer can help athletes and coaches see movement structure more clearly. It can support comparison between attempts. It can help make body organization easier to see against the complexity of the original video. It can make timing, range, rhythm, rotation, balance, and movement state easier to discuss. It can also create a shared visual reference between athlete and coach.

This matters because coaching communication is often visual and verbal at the same time. A coach may say, You are late here, or Your body opens too early, or You lose balance after contact. The athlete may understand the words but not see the movement clearly. Digital Human Feedback can help create a bridge between what the coach says and what the athlete sees.

In SpatialForm's method, Digital Human Feedback should remain connected to real sports video. It should not become detached from the athlete's actual movement. The video is the evidence. Performance Form is the product layer. Digital Human Feedback is one method layer that supports it.

The key difference is that Digital Human Feedback helps change the observation experience. In ordinary replay, the original recording angle controls what the athlete can see. In SpatialForm, the original recording angle provides the source evidence, but the movement can be reviewed through a spatial representation. This allows athletes and coaches to observe the movement state from additional spatial perspectives.

This distinction protects the product from becoming generic. SpatialForm is not a CAD tool. It is not a 3D printing workflow. It is not architecture software. It is not a generic 3D modeling environment. It is a Personal Athletic Intelligence product focused on athletic movement review.

Digital Human Feedback serves Performance Form.

10 Biomechanical Insight for Athletic Review

Biomechanical Insight means movement feedback that helps athletes and coaches understand how the body organizes motion.

Biomechanics is often associated with academic research, clinical settings, laboratory systems, and technical measurement. That context is valuable, but it can also make movement feedback feel inaccessible to everyday athletes. SpatialForm uses Biomechanical Insight in a practical athletic review sense: helping people understand movement organization from real video.

Performance improvement depends on understanding. An athlete cannot refine what they cannot read. A coach cannot clearly explain what remains hidden inside fast, complex motion. Biomechanical Insight gives the review process a language for discussing how the body organizes movement, without forcing the athlete into a laboratory setting.

This is where the spatial layer matters. In ordinary 2D replay, biomechanical discussion is often limited by the camera angle. When movement is structured through Single-Camera 3D Kinematics and supported by Digital Human Feedback, athletes and coaches can observe movement state more directly as spatial structure. Rotation, loading, extension, balance, timing, and range become easier to connect to what the body actually did.

For example, an athlete and coach may want to understand how the body organizes a serve. They may discuss loading, rotation, sequencing, balance, extension, rhythm, and recovery. These are biomechanically relevant movement ideas, but the conversation does not need to become clinical or overly technical. A useful product should translate movement evidence into feedback that athletes and coaches can actually use.

This translation layer is central to Performance Form.

A purely technical output can be difficult to interpret. A purely visual replay can be too unstructured. SpatialForm's method sits between those extremes. It aims to provide readable Personal Athletic Intelligence from Phone Sports Video, using biomechanical concepts where they help explain what the body did.

The purpose is athletic review. The purpose is to make movement easier to understand, observe, compare, and refine.

This requires disciplined language. SpatialForm should not promise outcomes it has not publicly validated. It should not claim that movement feedback will prevent injuries, diagnose conditions, or improve performance by a fixed percentage. It should not present itself as a medical device.

Instead, the product should stay focused on athletic performance review: what happened in the movement, how the body appeared to organize the action, what movement state can be observed from the Performance Form, what changed across attempts, which movement behaviors are worth discussing, and what the athlete and coach can refine next.

This is the professional lane for SpatialForm: not clinical diagnosis, not exaggerated performance claims, but structured movement review from ordinary Phone Sports Video.

11 The SpatialForm Performance Feedback Loop

SpatialForm is built to support athletic performance improvement by improving the quality of feedback.

Performance improvement does not begin with a number. It begins with a better understanding of movement. An athlete needs to know what happened before they can refine it. A coach needs movement evidence before they can explain it clearly. A training process needs comparison before it can identify meaningful change.

SpatialForm organizes this process into a feedback loop:

1. Capture the movement with ordinary Phone Sports Video.
2. Process the movement through Movement Intelligence.
3. Structure the movement with Single-Camera 3D Kinematics.
4. Support spatial observation through Digital Human Feedback.
5. Present the result as Performance Form.
6. Review form, timing, rhythm, range, movement state, and body organization.
7. Discuss the movement with clearer visual and analytical evidence.
8. Refine the movement in the next training cycle.
9. Compare new attempts over time.

This loop is where SpatialForm's approach to performance improvement begins.

The product does not need to promise a fixed improvement percentage to be performance-oriented. A professional performance tool can create value by making review more structured, observation more spatial, comparison more consistent, and feedback more actionable.

SpatialForm is designed for athletes and coaches who want to move beyond passive video replay. It gives them a way to make movement more readable, observation more complete, discussion more precise, and refinement more informed.

> **Better Performance Form creates better performance conversations. Better spatial observation creates better movement understanding. Better performance conversations create better opportunities for refinement.**
> **Better refinement creates a stronger path toward athletic improvement.**

SpatialForm does not replace training. It makes the movement evidence inside training easier to read.

12 Boundaries and Limitations

A professional Personal Athletic Intelligence product must be clear about what it does and does not claim.

SpatialForm is built around a phone-video-first approach to athletic movement review, spatial observation, and performance feedback. That approach has meaningful value, but it also has boundaries.

SpatialForm is not a clinical diagnosis tool

SpatialForm should not be used as a medical diagnosis system. It does not provide injury diagnosis, treatment guidance, rehabilitation prescription, or clinical validation claims in this white paper. Athletes with pain, injury, medical conditions, or rehabilitation needs should consult qualified medical or clinical professionals.

SpatialForm is not presented as a replacement for laboratory motion capture

This white paper does not claim that SpatialForm replaces marker-based motion capture, multi-camera laboratory systems, force plates, or specialized biomechanical research equipment. Those systems can provide controlled measurement conditions that ordinary Phone Sports Video cannot replicate. SpatialForm's method is focused on making athletic movement more readable and more spatially reviewable from accessible video capture.

SpatialForm does not claim benchmark accuracy without public data

This white paper does not state accuracy percentages, benchmark results, performance improvement percentages, or validation claims that are not publicly supported. SpatialForm's positioning should remain disciplined: Personal Athletic Intelligence, Phone Sports Video, Performance Form, Single-Camera 3D Kinematics, Movement Intelligence, Digital Human Feedback, and Biomechanical Insight.

Phone Sports Video quality matters

Not all videos are equally useful. Review quality may be affected by camera angle, distance from athlete, lighting, frame rate, motion blur, occlusion, clothing, background complexity, incomplete body visibility, unstable camera placement, and sport-specific movement speed. A phone-video-first method should provide practical value while acknowledging that capture conditions influence review quality.

Performance Form depends on source video

SpatialForm can change how movement is observed, but the original Phone Sports Video remains the source evidence. The quality of the Performance Form depends on what the video makes available. The recorded angle is no longer the only observation angle, but it still matters as the capture angle. Better capture conditions can support better review.

Coaching context remains essential

SpatialForm should support coaching judgment, not replace it. A movement review layer can help athletes and coaches inspect evidence, compare attempts, observe movement state, and discuss form behavior. But sport performance also depends on intent, tactics, fatigue, training history, skill level, physical capacity, match context, and coaching philosophy. The product can make movement more readable and more spatially observable. The athlete and coach still provide context.

A review layer is not the same as a final answer

Personal Athletic Intelligence should not be treated as an automatic verdict. The best use of SpatialForm is as a structured review system: a way to make video-based movement evidence easier to understand, observe, compare, and refine. The goal is better performance feedback, not overconfident automation.

13 SpatialForm Glossary

SpatialForm's method depends on a clear language system. The following terms define the product's conceptual foundation.

Personal Athletic Intelligence

Personal Athletic Intelligence is SpatialForm's highest-level product category. It defines SpatialForm as a product that turns Phone Sports Video into personal, readable, spatially observable athletic insight for athletes and coaches. Personal Athletic Intelligence is not generic fitness tracking. It is not medical diagnosis. It is not a replacement for coaching judgment. It is the category that describes SpatialForm's role in helping athletes understand and refine their own movement.

Performance Form

Performance Form is the core user-facing layer of SpatialForm. It is the visual and analytical layer through which Personal Athletic Intelligence becomes visible, understandable, and useful to the athlete. Performance Form is not just a score. It is a movement review layer created from real Phone Sports Video. Performance Form helps athletes and coaches inspect form behavior, timing, rhythm, range, movement state, body organization, and spatial structure.

Phone Sports Video

Phone Sports Video is ordinary athletic video recorded with a smartphone. It is the starting point for SpatialForm. The missing layer is not capture. The missing layer is reading what the body actually did.

Single-Camera 3D Kinematics

Single-Camera 3D Kinematics refers to reviewing movement in three-dimensional structure from ordinary Phone Sports Video. In SpatialForm, it supports Performance Form by helping movement become spatially readable while respecting the limitations of single-camera footage.

Movement Intelligence

Movement Intelligence is the method process of making athletic movement readable, reviewable, spatially observable, and easier to discuss from real sports video. It is not the top-level product category. It is the process that helps convert Phone Sports Video into Performance Form.

Digital Human Feedback

Digital Human Feedback is a method layer that supports Performance Form. It helps make movement visually and spatially observable by representing motion in a way that can be reviewed beyond the original 2D camera angle. It is not the main user-facing product category. It serves Performance Form.

Biomechanical Insight

Biomechanical Insight means movement feedback that helps athletes and coaches understand how the body organizes motion. In SpatialForm, Biomechanical Insight is used for athletic review. It is not medical advice, injury diagnosis, or treatment guidance.

14 Conclusion

Athletes already record themselves. Coaches already use video. The capture habit exists.

But ordinary video is not enough on its own.

A video can show movement without explaining movement. It can display the body without making body organization readable. It can preserve a moment without helping the athlete understand timing, rhythm, range, movement state, or form behavior. It can create evidence, but not necessarily insight.

Ordinary video also keeps movement locked inside the original 2D recording angle. The athlete can watch what the camera saw, but athletic movement itself happens in space.

> The problem is not capture.
> The problem is reading what the body actually did.

SpatialForm is built around this problem.

As a Personal Athletic Intelligence product by Nous Technology Limited, SpatialForm turns Phone Sports Video into Performance Form: a spatially readable, reviewable, and actionable representation of athletic movement.

Performance Form is where the athlete experiences SpatialForm. It is the visual and analytical layer that helps athletes and coaches review movement, observe movement state, compare attempts, and refine form over time.

Behind Performance Form, SpatialForm uses Movement Intelligence as a method process, Single-Camera 3D Kinematics as a spatial review structure, Digital Human Feedback as a supporting visual method layer, and Biomechanical Insight as a language for understanding how the body organizes motion.

SpatialForm is performance-oriented because it improves the feedback loop around movement. It helps athletes and coaches see more clearly, observe more spatially, discuss more precisely, compare more consistently, and refine movement with better evidence.

The product's position is deliberately focused. SpatialForm is not CAD. It is not 3D printing. It is not architecture software. It is not a generic 3D modeling tool. It is not a clinical diagnosis system. It is not presented as a replacement for laboratory motion capture or coaching judgment.

SpatialForm is Personal Athletic Intelligence for athletes and coaches who want to understand athletic motion from real video.

> The camera is already there.
> The athlete is already recording.
> The next layer is Performance Form.
> The category is Personal Athletic Intelligence.

SpatialForm turns Phone Sports Video into Performance Form.

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