

# AI-FIRST DIGITAL ENGINEERING FOR SPORTS



Action : Throw

Ball Speed : 60 mph

Object : Football

Player : Tom Brady

Jersey No.: 12

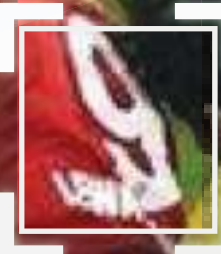


Object : Football



Jersey No. : 9

Player : Robert  
Lewandowski



Jersey No. : 15

Player : Mats  
Hummels



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## Scoring on Innovation with an AI-assist.

Using AI-ML models and intelligent sports analytics solutions are imperative to build a smarter world for sportsmen, advertisers, broadcasters, coaches, scouts, and fans worldwide.

Quantiphi leverages a combination of deep learning, computer vision, and cutting-edge AI to reimagine the major sports disciplines. We use computer vision-powered solutions to collect athletes' performance data and leverage groundbreaking AI tools to gather insights regarding the audience's sentiment.

Quantiphi's machine learning (ML) and deep learning (DL) systems process the aforementioned data to create forecast models and assist scouts, coaches, and managers with their decision-making, and help automate numerous complex workflows related to broadcasting and fan experience.

# AI-FIRST DIGITAL ENGINEERING FOR SPORTS



## MEDIA INTELLIGENCE APPLICATIONS

Media Intelligence for Sports is a combination of AI offerings for content-intensive sports companies & OTT Platforms. They are perfect solutions for content owners who need to search desired sporting moments from their vast archives and automate content operations.

## SPORTS ANALYTICS

Objectively analyze players and the game using computer vision and deep learning. Our sports analytics solutions enable coaches and scouts to build a competitive edge over their opponents. Here, we combine data-driven insights with sports storytelling to improve fan experiences for sports broadcasters.

## SMART STADIUMS

Makes stadium and match-day experiences better, more engaging and profitable. Our deep expertise in video analytics and connected IoT enables stadiums to build secure environments, track visitor data, and effectively manage the match-day experience.



# MEDIA INTELLIGENCE FOR SPORTS

- ▶ AI For Sports Archiving
- ▶ Player Tracking & Auto-highlights

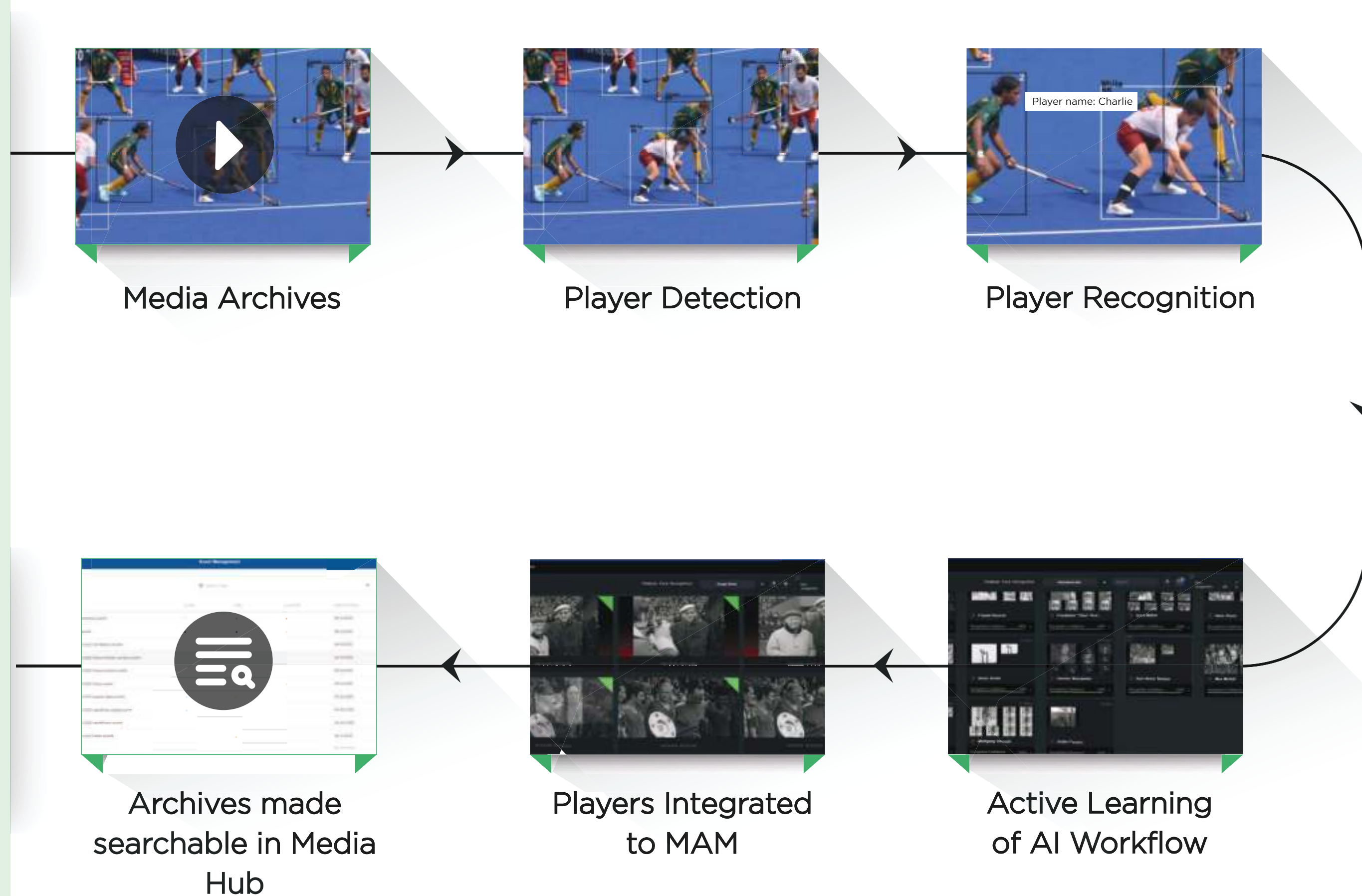
# AI FOR SPORTS CONTENT ARCHIVING

## OVERVIEW

Sporting Leagues worldwide generate an enormous amount of video content in live match footage, post-match coverage, training sessions, videos, and player interviews. Worldwide Global leagues have accumulated thousands of hours of content spanning decades. Searching edit-worthy moments and desired player footage is like finding a needle in a haystack.

AI-assisted sports archiving is necessary for any sports content publisher. Manual video tagging can be replaced with machine learning (ML) driven algorithms. The algorithm automatically analyzes and tags videos in real-time, allowing the users to quickly find what they're looking for - players, events, desired objects, specific camera angles, and so on.

## SOLUTION WORKFLOW



## SOLUTION FEATURES

- Intelligent Video Processing Model
- Player Identification
- Hypertagging Engines tuned to the requirement of a particular Sports

## BENEFITS AND BUSINESS IMPACT

- Helps them to effectively manage and understand their content archives
- Higher accuracy in tagging for better search and retrieval
- Ability to repurpose existing content, create specific highlight

# PLAYER TRACKING & AUTO-HIGHLIGHTS

## OVERVIEW

Global sports fans are divided with their favorite players, teams and even action. Every single match can offer multiple perspectives. Today broadcasters and content publishers need to create personalized content for different fan segments. With timelines getting shorter, the pressure on editorial teams is immense.

Player tracking and auto-highlights is an AI solution to extract information from sports videos instantly. It is the perfect solution for sport content owners who need to unearth players related information from their match footage archives and automate tedious tasks such as creating highlight reels, headshots, and other editorial workflows.

## SOLUTION WORKFLOW



## SOLUTION FEATURES

- Intelligent Video Processing to assess multiple camera angles
- Pose Estimation
- Action Recognition
- Ball Tracking
- Performance Analysis

## BENEFITS & BUSINESS IMPACT

- Faster production of game highlights as per editorial requirements
- Better search and retrieval of content across sports footage
- Higher fan engagement due to customized highlights



# SPORTS ANALYTICS

- ▶ Player Performance Analytics
- ▶ Injury Detection & Management

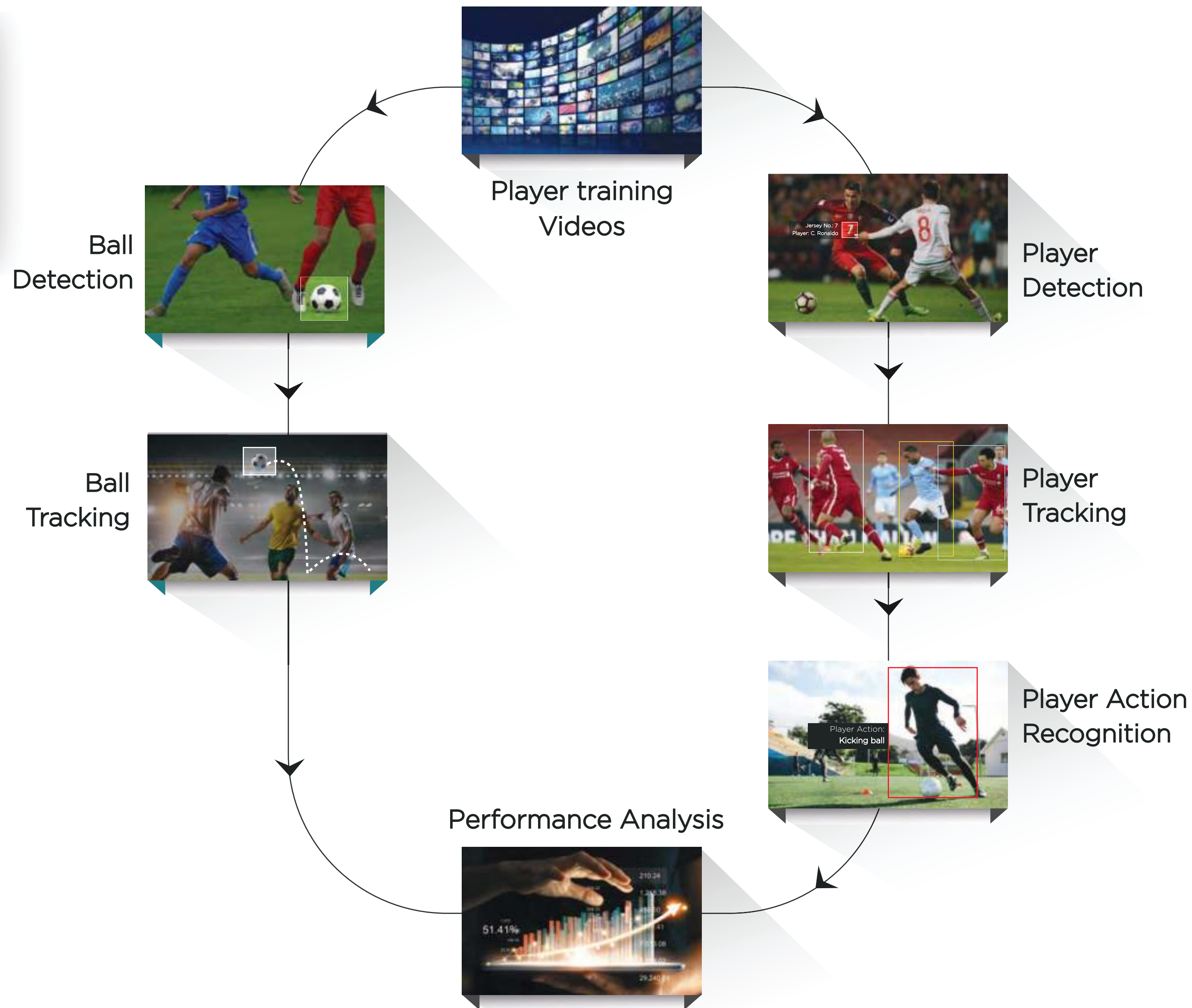
# PLAYER PERFORMANCE ANALYTICS

## OVERVIEW

For a long time, sportsmen and coaches have relied on experience, gut feel, and the knack of identifying "intangible" player qualities to excel in their jobs. The cut-throat competition in the sports industry and the ever-decreasing margins of errors have made it essential to modernize the approach towards training and supplementing it with evidence-based decision-making.

Player Performance Analytics provides a complete picture of your athletes' performance in the training ground or matches.

Powered by Computer Vision, the AI-powered solution uses the recorded footage and metadata to analyze each player's performance through intuitive dashboards and use this analysis to devise strategies.



## SOLUTION FEATURES

- Intelligent Video Processing to assess multiple camera angles
- Pose Estimation
- Action Recognition
- Ball Tracking
- Performance Analysis

## BENEFITS & BUSINESS IMPACT

- Generating player performance metrics which helps in evaluating a player
- Provide technical analysis to improve their skills
- Provide tactical analysis to improve their match play



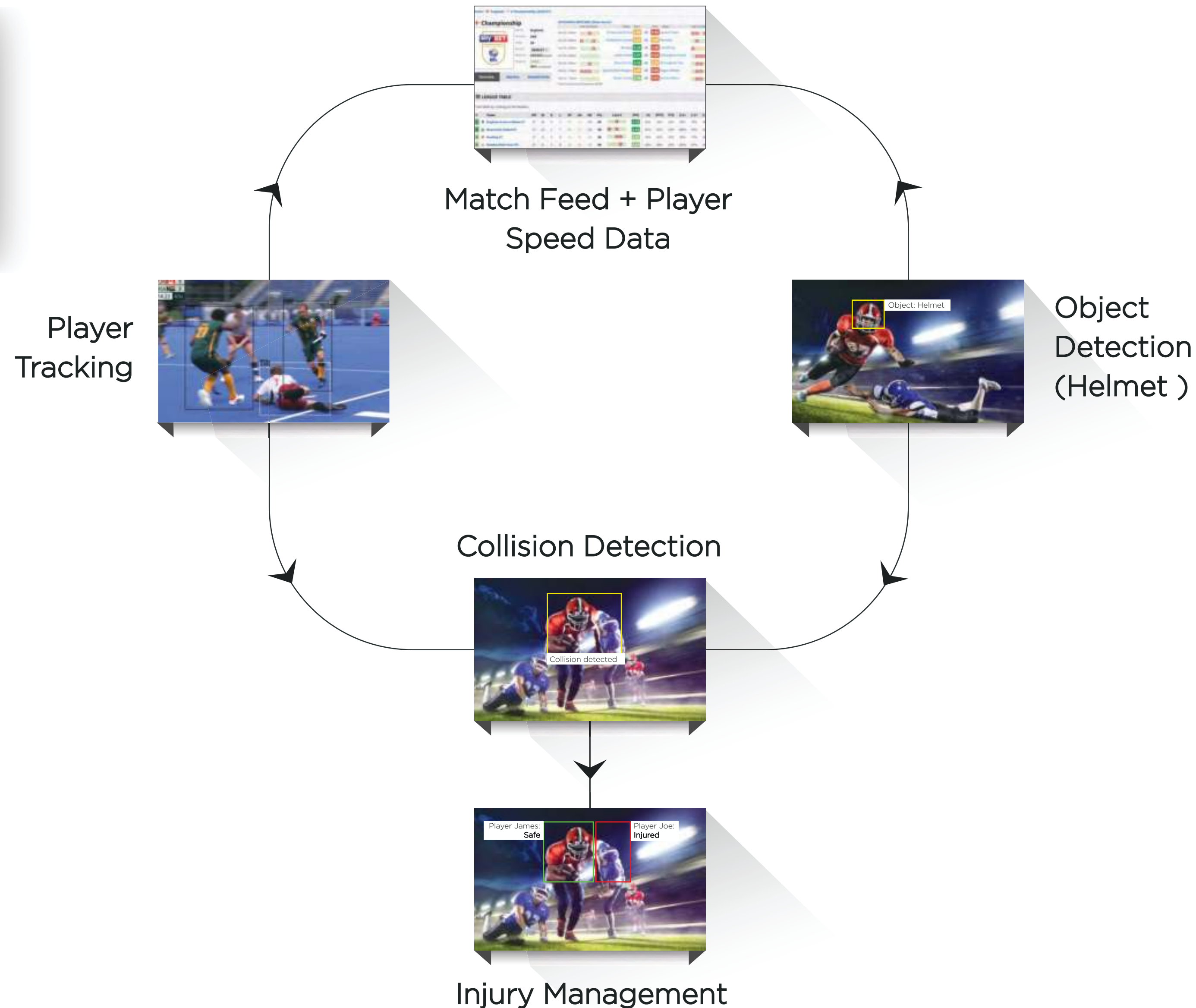
# INJURY DETECTION & MANAGEMENT

## OVERVIEW

Quantiphi's solution aims to make contact sport safer by leveraging player tracking and collision detection. The solution analyzes footage from cameras placed at strategic spots on the field and uses collision detection and player tracking to identify the degree of impact.

Metrics like individual game time, total distance covered, collision counts and head impacts enables us to predict possible health concerns and manage players' fitness.

Efficient tracking of injuries and history of exposure helps players and teams to analyze the causes of such incidents and subsequently mitigate them.



## SOLUTION FEATURES

- Computer Vision
- Helmet Mapping
- Player Jersey Number Recognition
- Jersey Color Detection
- Player Collision Detection

## BENEFITS & BUSINESS IMPACT

- Protect players from fatal & career-ending injuries
- Understanding the severity of the injury
- Determine resting/recovery periods for the injured players



# SMART STADIUMS

## ▶ Intelligent Video Analytics

- ▶ Smart Surveillance
- ▶ Smart Operations
- ▶ Compliance Measurement

# SMART STADIUMS

## OVERVIEW

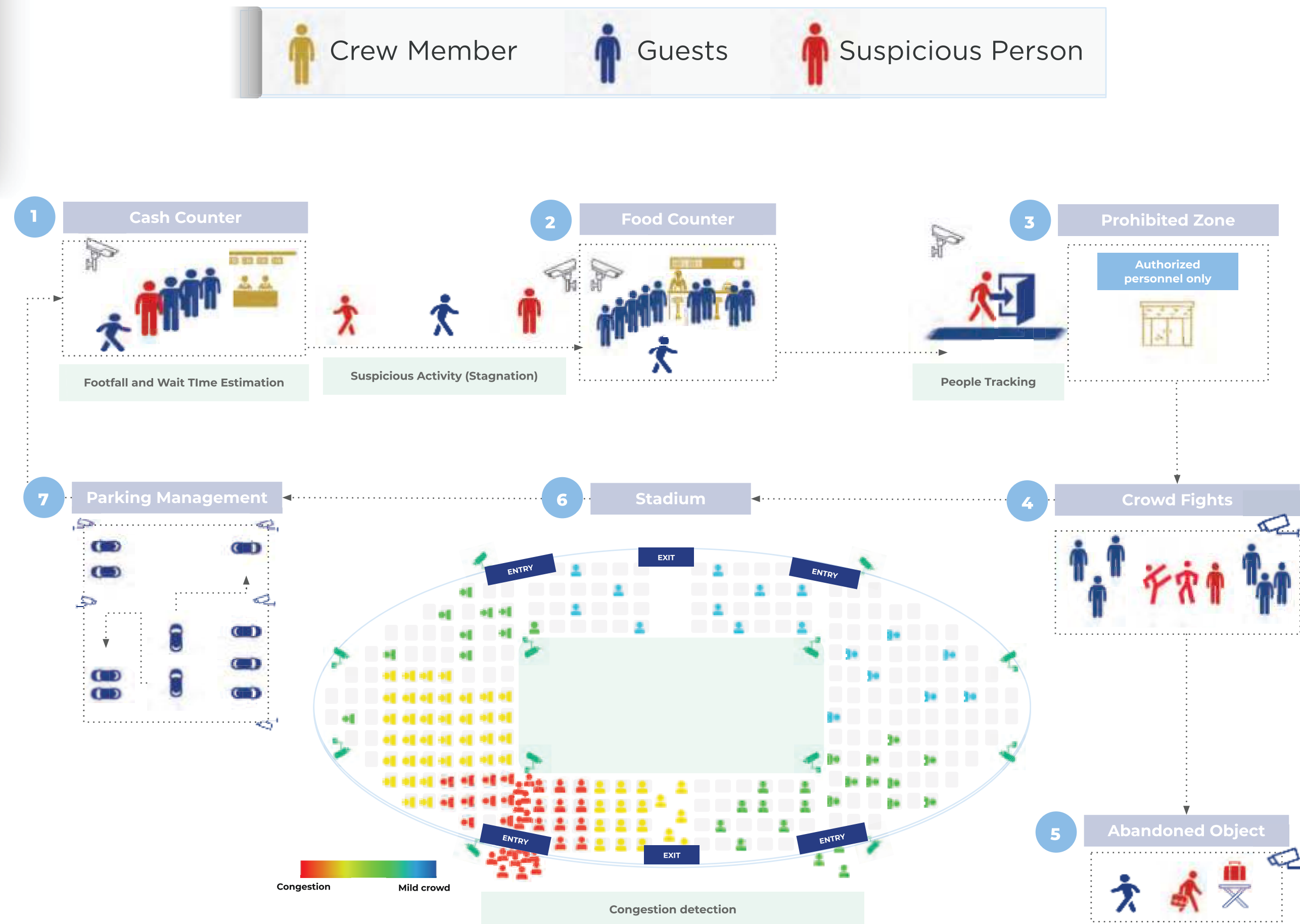
Stadiums across the globe deploy conventional camera-based monitoring systems for surveillance and operations. Despite the presence of cameras, visitor experience and surveillance improvements for stadiums have been traditionally reactive.

Intelligent Video Analytics makes match-day experiences better, engaging and profitable. Through video analytics and connected IoT we build secure environments, track visitor data, and improve day-to-day operations.

Smart surveillance - Detect unsafe behavior, intruders and suspicious activities.

Smart operations - Manage assets, inventory and improve day-to-day operations.

Compliance measurement - Social distance compliance and customer tracking



## SOLUTION FEATURES

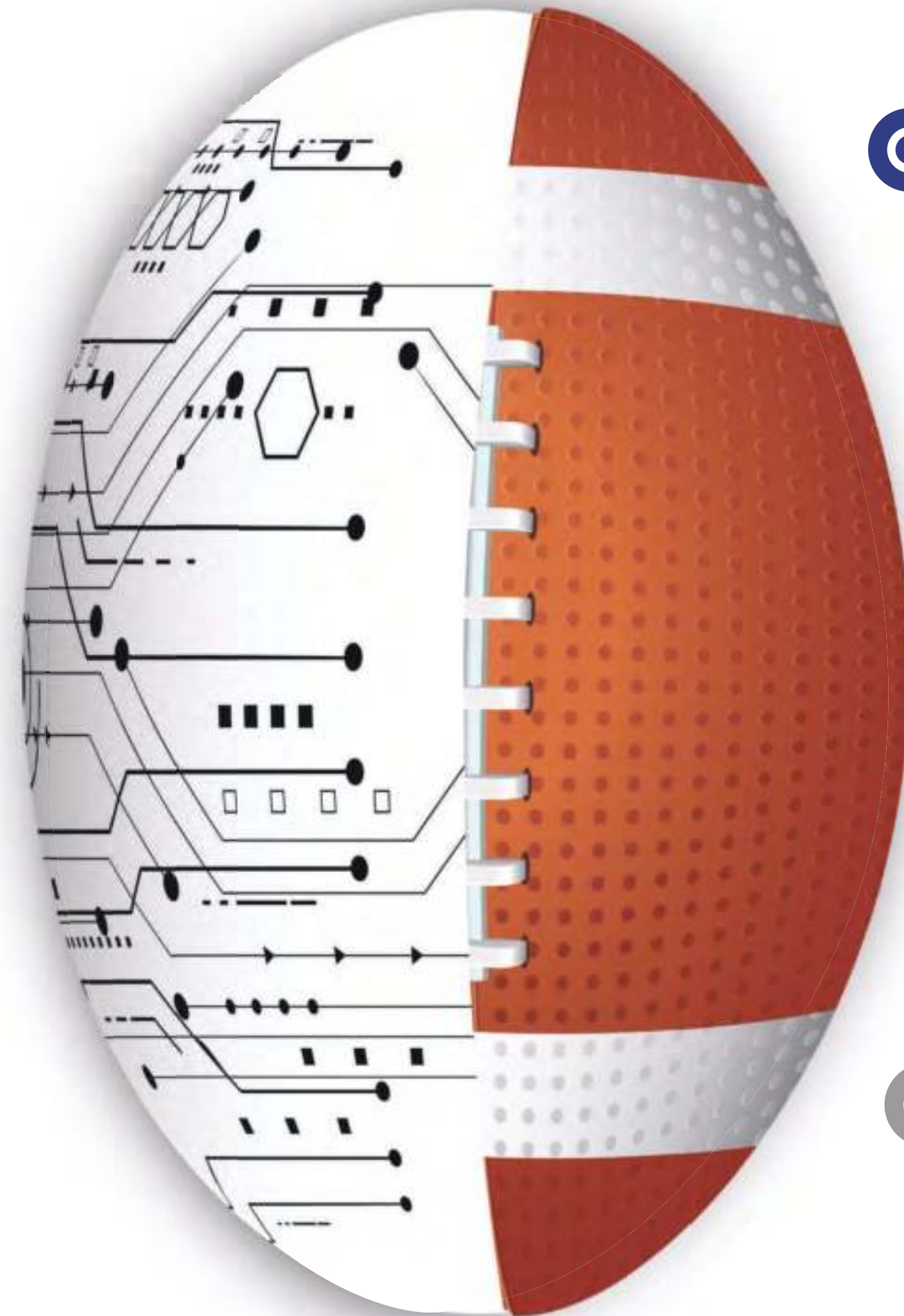
- Intrusion Detection
- Queue Analytics
- Crowd Density Analysis
- PPE & Social Distancing Measurement
- Parking Management
- Suspect and attribute search
- Riot detection

## BENEFITS & BUSINESS IMPACT

- Safe and secure premises
- Better customer experience
- Improvement in operational efficiency
- Reduction in manual overhead
- Reduced response time in case of an incident
- Enhanced capability/reduction in turn-around time for post-incident analysis

# IDENTIFYING THE RIGHT AI USE CASE

## NAILING THE IMPACT ZONE



### TECHNOLOGY

Understand the tasks in which AI is nearing or breaching human levels of performance.



### TIME


What are the tasks where inference/decision can be made in a matter of seconds




### COST


Finding activities within your business that are expensive and repetitive, yet cannot be reduced to simple heuristics.


Computer Vision 

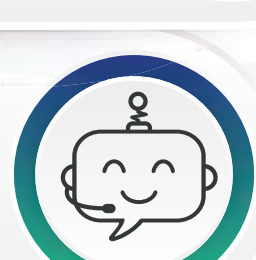
Business Intelligence 

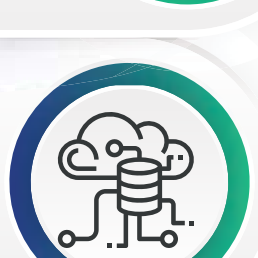
Document AI 


Data Modernization 

Data Analytics 

5G MEC & Edge AI 

Conversational AI 

Cloud Migration 

ML Ops 



Google Cloud Partner  
of the Year Awards -  
Data Analytics



Leader in  
IDC MarketScape:  
Worldwide AI IT Services



Rated as  
a Leading Major Player  
in the IDC MarketScape



Elite Partner



Named a leader in the  
Forrester New Wave :  
Computer Vision  
Consultancies



Quantiphi's AI-powered  
Video Deduplication  
wins at IABM BaM  
Awards® 2021



# SOLVING WHAT MATTERS FOR SPORTS



Quantiphi is an award-winning AI-first digital engineering company driven by the desire to solve transformational problems at the heart of business. Quantiphi solves the toughest and complex business problems by combining deep industry experience, disciplined cloud and data engineering practices, and cutting-edge artificial intelligence research to achieve quantifiable business impact at unprecedented speed. We are passionate about our customers and obsessed with problem-solving to make products smarter, customer experiences frictionless, processes autonomous and businesses safer by detecting risks, threats and anomalies. For more on Quantiphi's capabilities, visit [www.quantiphi.com](http://www.quantiphi.com)