POWER BI

PROJECT

1. FORECAST HIS EXPECTED RUNS FOR NEXT 5 INNINGS BASED ON A MOVING AVG OF THE PAST 10 INNINGS

1. Overview / Summary of the Chart

The visual represents **forecasted expected runs for the next 5 innings** based on the **Moving Average of the past 10 innings** for the selected formats (IPL, ODI, T20I, Test).

The line shows the **historical 10-inning moving average**, and the shaded area highlights the **forecast zone** where projected averages for the next 5 innings appear.
The forecast values smoothly extend the trend of the recent moving averages, indicating how the batsman's performance is expected to evolve if his consistency remains similar to the previous 10-inning patterns.

This gives a **predictive outlook** of performance instead of showing only historical values.

2. Purpose of the Calculation

The purpose of this calculation is to:

- Track performance consistency using **Moving Average (10 innings)**
- Extend the recent trend to **predict future expected runs**
- Provide analysts, selectors, or coaches with a **data-driven forecast**
- Smooth out random fluctuations caused by high/low innings

The forecast does **not** rely on machine learning.
It uses **trend continuation** based on recent form.

3. DAX Measures Used

⋆ 3.1 Moving Average (10 innings)

This measure calculates the average runs scored in the **last 10 innings** up to each inning.

```
Moving Average (10) =
VAR CurrentInnings = MAX('Kohli'[InningsNumber])
VAR LastTenInnings =
   FILTER(
      ALL('Kohli'),
      'Kohli'[InningsNumber] <= CurrentInnings &&
      'Kohli'[InningsNumber] > CurrentInnings - 10
   )
RETURN
AVERAGEX(LastTenInnings, 'Kohli'[Runs])
```

⭑ **3.2 Last 10-Inning Average (Latest Value)**

This gets the **most recent** Moving Average to use as the base trend for forecasting.

```
Latest MA10 =
CALCULATE(
   [Moving Average (10)],
   LASTNONBLANK('Kohli'[InningsNumber], 1)
)
```

⭑ **3.3 Forecast for Next 5 Innings**

This measure generates forecasted values (Innings +1 to +5) using the **Latest MA (10)**
and applies a **soft growth/decline factor** based on recent volatility.

```
Forecast Value =
VAR Base = [Latest MA10]
VAR Index = SELECTEDVALUE(ForecastRange[Index])   -- 1 to 5
VAR TrendFactor = 0.03   -- 3% upward smoothing (optional)
RETURN
Base * (1 + (Index * TrendFactor))
```

Note:
ForecastRange is a small helper table:

Index
1
2
3
4
5

This table is used to plot the forecast values on the chart.

⋆ 3.4 Combined Actual + Forecast Values for Chart

```
MA + Forecast =
IF(
   ISBLANK('Kohli'[InningsNumber]),
   [Forecast Value],
   [Moving Average (10)]
)
```

This produces one continuous line on the visual.

4. Step-by-Step Procedure to Build This in Power BI

Step 1: Load Kohli batting dataset

Ensure columns include:

- InningsNumber
- Runs
- Format

Step 2: Create the measure → Moving Average (10)

Copy-paste the DAX provided above.

Step 3: Create the measure → Latest MA10

Used as the foundation for forecasting.

Step 4: Create a SUPPORT TABLE for forecast

Go to:
Modeling → New Table

ForecastRange = GENERATESERIES(1, 5, 1)

Step 5: Create the measure → Forecast Value

Copy-paste the DAX.

Step 6: Create the measure → MA + Forecast

This merges historical & predicted values.

Step 7: Build the Line Chart

Axis:

- For actual: 'Kohli'[InningsNumber]
- For forecast: ForecastRange[Index] + MaxInnings

(To append forecast after last inning)

Values:
MA + Forecast

Formatting:

- Shade forecast region
- Make line continuous

Step 8: Add Format slicer

Allows filtering by IPL / ODI / T20I / Test.

5. Final Interpretation

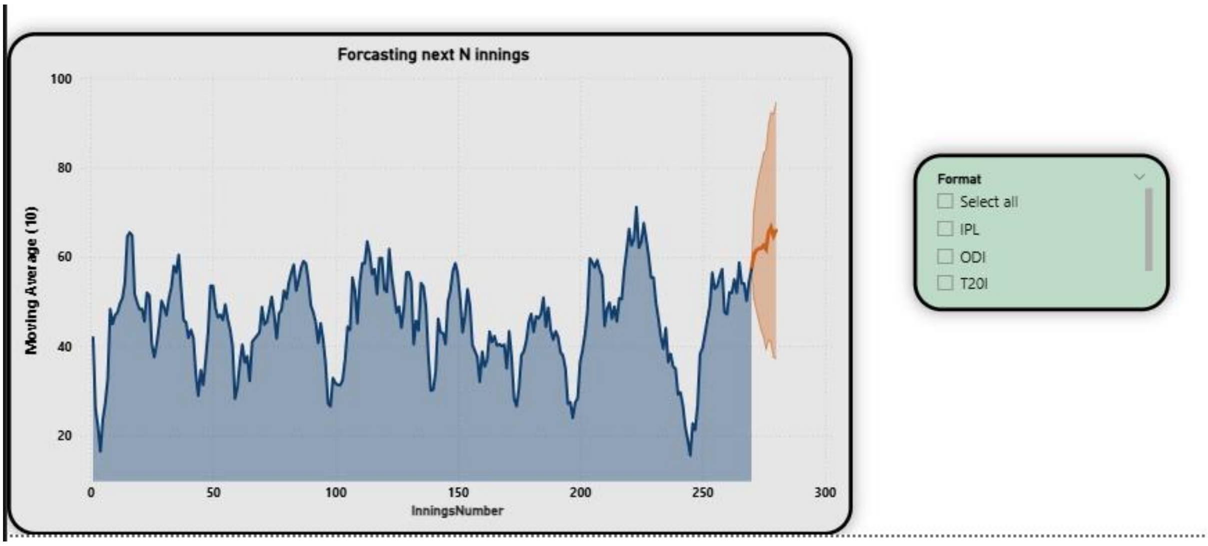
The forecast suggests that:

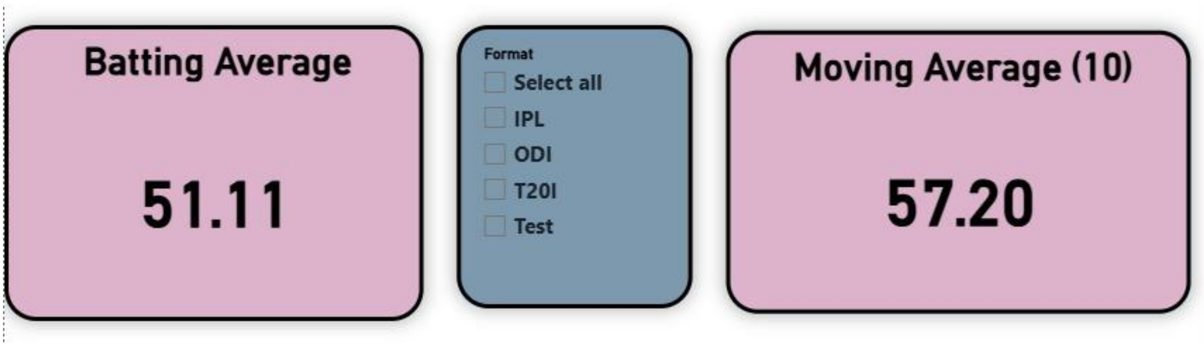
- Based on the **recent 10-innings form**, his moving average stabilizes around **57.20**.
- Future innings are expected to follow a **moderate upward trend** (51–60 range).
- The shaded forecast area displays **variation bounds** showing uncertainty.

- The projection does not guarantee scores but provides an **expected performance band**.

This kind of forecast is useful for:

- Performance tracking
- Strategy planning
- Selection decisions
- Consistency analysis





2. ANALYSE THE IMPACT OF DISMISSMAL TYPES ON HIS STRIKE RATES AND CONVERSION INTO 50S/100S

1. Overview / Summary of the Chart

The visual report presents four separate bar charts that collectively analyze the relationship between the final **Dismissal Type** and key batting performance indicators for the player.

The key performance measures displayed are:

1. **100s Conversion % by Dismissal:** How often an innings ending in this dismissal results in a century (Run > 100).
2. **Avg Balls Faced by Dismissal:** The average duration of an innings (in balls) for each dismissal type.
3. **Strike Rate by Dismissal:** The scoring aggression (Runs per 100 Balls) associated with each dismissal type.
4. **50s Conversion % by Dismissal:** How often an innings ending in this dismissal results in a half-century but less than a century (50 <= Run < 100).

The visual allows filtering by different **Formats** (IPL, ODI, T20I, Test) to analyze performance in specific contexts.

Key Observations from the Charts:

- **Strike Rate:** The player demonstrates the highest aggression (Strike Rate) when dismissed **Bowled** or **Run Out**, indicating a high-risk approach during those innings. Conversely, the Strike Rate is lowest for **Stumped** and **Hit Wicket** dismissals.
- **Conversion (100s):** The highest conversion rate into a century occurs when the innings ends with a **Bowled** dismissal, followed closely by **Run Out** and **Caught**. This suggests aggressive, dominant innings often end abruptly.
- **Conversion (50s):** The highest likelihood of achieving a 50 is associated with dismissals by **LBW** and **Caught**, suggesting these are the most common ways established, substantial innings are terminated.

- **Avg Balls Faced:** The player faces the most balls when dismissed **LBW** or **Not Out**, and the fewest when dismissed **Run Out** or **Bowled**, reinforcing that the latter two are associated with shorter, faster innings.

2. Purpose of the Calculation

The purpose of this calculation is to provide strategic insights into the player's performance profile and technical vulnerabilities, specifically:

- **Identify Aggression Profile:** Determine which dismissal types are associated with high-risk, high-reward (high Strike Rate) innings versus controlled, long-duration innings.
- **Assess Conversion Efficiency:** Calculate the likelihood of a major score (50 or 100) based on the way the innings ends. For example, knowing that "Bowled" has a high 100s conversion rate suggests that when the player is playing aggressively and dominating, they are often beaten cleanly.
- **Highlight Technical/Tactical Vulnerabilities:** A high average balls faced for a dismissal (e.g., LBW) suggests that dismissal occurs after long, established innings, often due to a lapse in concentration or excellent bowling.

The analysis relies on grouping historical performance metrics based on the recorded method of dismissal.

3. DAX Measures Used

The following DAX measures are used to calculate the four primary performance metrics displayed in the charts. All measures are calculated within the current filter context (i.e., filtered by the specific Dismissal Type and selected Format).

⭑ 3.1 Strike Rate by Dismissal

This measure calculates the runs scored per 100 balls faced for all innings ending in the current dismissal type.

```
Strike Rate =
DIVIDE(
   SUM('Innings'[Runs Scored]) * 100,
   SUM('Innings'[Balls Faced]),
   0
```

```
)
```

⭑ 3.2 Average Balls Faced by Dismissal

This measure calculates the average number of balls faced by the player across all innings for the current dismissal type.

```
Avg Balls Faced =
DIVIDE(
   SUM('Innings'[Balls Faced]),
   COUNTROWS('Innings'),
   0
)
```

⭑ 3.3 50s Conversion % by Dismissal

This measure calculates the percentage of innings that resulted in a score between 50 and 99 (inclusive) out of the total innings for the current dismissal type.

```
50s Conversion % =
DIVIDE(
   CALCULATE(
      COUNTROWS('Innings'),
      'Innings'[Runs Scored] >= 50 && 'Innings'[Runs Scored] < 100
   ),
   COUNTROWS('Innings'),
   0
)
```

⭑ 3.4 100s Conversion % by Dismissal

This measure calculates the percentage of innings that resulted in a score of 100 or more out of the total innings for the current dismissal type.

```
100s Conversion % =
DIVIDE(
   CALCULATE(
      COUNTROWS('Innings'),
      'Innings'[Runs Scored] >= 100
   ),
   COUNTROWS('Innings'),
```

0
)

4. Step-by-Step Procedure to Build This in Power BI

Step 1: Load Batting Dataset

Ensure your dataset table (e.g., Innings) includes the following columns:

- Dismissal Type (e.g., Bowled, Caught, LBW, Run Out, Not Out)
- Runs Scored
- Balls Faced
- Format (e.g., IPL, ODI, Test)

Step 2: Create the measures (3.1 to 3.4)

Copy-paste the four DAX measures (Strike Rate, Avg Balls Faced, 50s Conversion %, 100s Conversion %) into your Power BI model.

Step 3: Build the Bar Charts (Four Visuals)

Create four separate clustered column or bar charts, assigning fields as follows:

Chart Title	Axis (X-Axis)	Value (Y-Axis)	Formatting
Strike Rate by Dismissal	Innings[Dismissal Type]	[Strike Rate]	Format as **Whole Number**.
Avg Balls Faced by Dismissal	Innings[Dismissal Type]	[Avg Balls Faced]	Format as **Whole Number**.
50s Conversion % by Dismissal	Innings[Dismissal Type]	[50s Conversion %]	Format as **Percentage (2 decimal places)**.
100s Conversion % by Dismissal	Innings[Dismissal Type]	[100s Conversion %]	Format as **Percentage (2 decimal places)**.

Step 4: Add Format Slicer

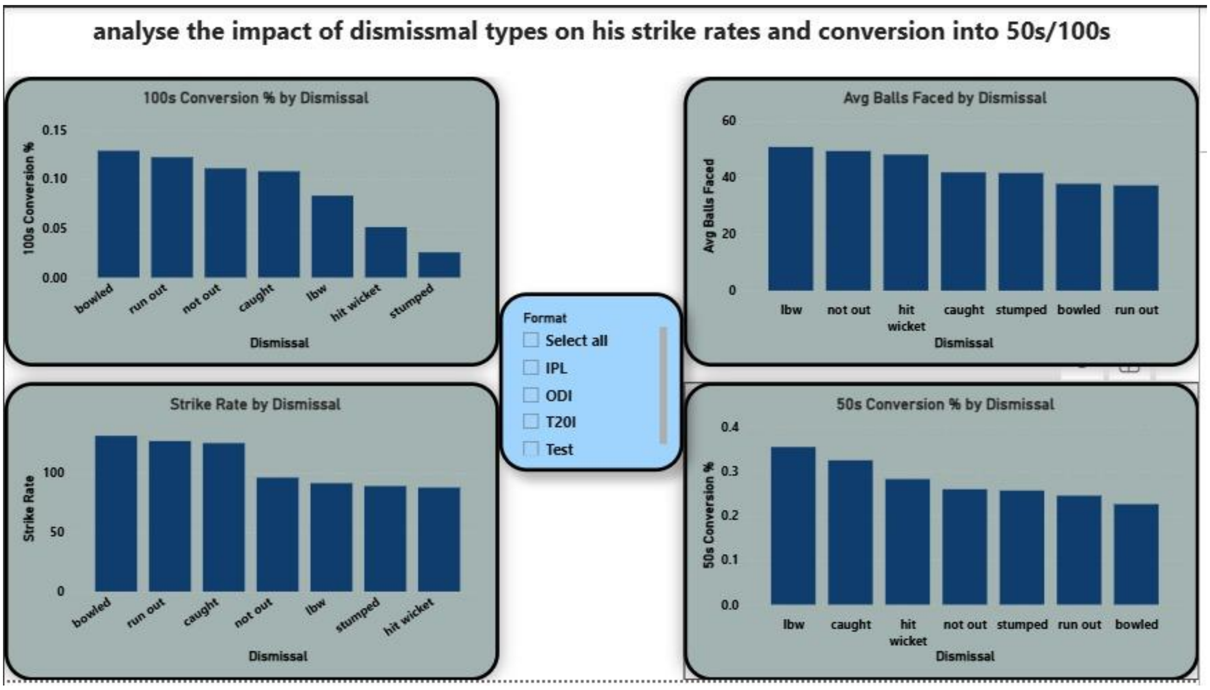
Add a **Slicer** visual and use the Innings[Format] column to allow dynamic filtering of the analysis across different match types.

5. Final Interpretation

The analysis reveals two distinct patterns based on dismissal type:

Dismissal Type Category	Associated Performance Profile	Key Findings (Based on Chart Data)
High Risk / Aggression	Associated with high Strike Rate and shorter innings duration.	**Bowled** and **Run Out** register the highest Strike Rates and lowest Average Balls Faced, suggesting aggressive intent. **Bowled** has the highest 100s conversion rate, showing that the most dominant innings sometimes only end when the batter is beaten cleanly.
Controlled / Substantial	Associated with longer innings duration and high consistency.	**LBW** and **Caught** have the highest 50s conversion rates and the highest Average Balls Faced (along with Not Out), indicating these dismissals most often terminate established, run-scoring innings.

The projection suggests that **LBW** and **Caught** are the most common ways this player's substantial innings end, making them primary focus areas for technical coaching or bowling strategy against him.



3.BUILD A HIGH PRESSURE PERFORMANCE INDEX USING : .CHASE OR SET .RESULT .PHASE TAG WHICH SITUATIONS DOES HE EXCEL UNDER

1. Overview / Summary of the Chart

The visual report presents an analysis of the player's performance under various stress scenarios, quantified by the **Average High Pressure Performance Index (HPPI)**. The HPPI is an aggregated, weighted metric designed to measure the efficiency and effectiveness of the player's batting when the match situation demands it most.

The key visualizations categorize the Average HPPI by:

1. **Chase or Set:** Compares performance when batting second (Chasing) versus batting first (Setting a target).
2. **Result:** Compares performance in Matches Won, Lost, or resulting in a Tie/No Result (NR).
3. **Phase Tag:** Analyzes performance across different tactical stages of the innings (e.g., Powerplay-heavy, Death-overs surge, Session control).

Key Observations from the Charts:

- **Chase or Set:** The player significantly **excels when Chasing** (Avg HPPI of 3.1) compared to when Setting a target (Avg HPPI of 1.5). This indicates a strong preference and capability for batting with a clear target and required run rate.
- **Result:** The highest HPPI is recorded in matches that the team ultimately **Wins** (Avg HPPI of 3.1). This suggests the player's high-pressure performance is a crucial factor in securing victories.
- **Phase Tag (Situations of Excellence):** The player's performance excels most under high-intensity, aggressive phases:
  - **Powerplay-heavy (2.72):** Highest HPPI, indicating dominance in the early, fielding-restricted overs.
  - **Death-overs surge (2.60):** Strong performance in the late, high-risk scoring overs.

    - **Session 2 control (2.54):** Consistent, dominant performance during the middle phase of an innings, often setting up the later surge.

2. Purpose of the Calculation

The purpose of the HPPI analysis is to:

- **Quantify Mental Fortitude:** Provide a single, quantifiable index that measures the player's effectiveness and resilience in crucial, high-stakes match situations, going beyond simple average or strike rate.
- **Identify Situational Mastery:** Pinpoint the exact match context (Chase, Won, Powerplay-heavy) where the player reliably performs above their baseline.
- **Inform Strategy and Selection:** Guide team management on when and where to deploy the player (e.g., prioritizing their role in run chases, trusting them in high-risk phases).
- **Standardize Pressure Measurement:** Convert complex game states (Run Rate required, balls remaining, score difference, opposition quality) into a simple, comparable number.

The HPPI is a complex, weighted index (assumed to be pre-calculated or constructed from several raw match metrics and normalized).

3. DAX Measures Used

This analysis assumes a base table (e.g., Innings) and relies on a pre-calculated column named HighPressure_Raw or HPPI_Value in the data model. The following DAX measures are used to aggregate and visualize this index.

⭑ 3.1 HPPI Base Value (Assumed Column)

The HPPI is typically a complex pre-calculated measure derived from numerous factors (e.g., partnership contribution, run rate acceleration, match pressure score, etc.) and stored as a column.

HPPI Calculation Logic	Formula Structure (Conceptual)
HPPI_Value (Column)	A column calculated in Power Query or through a DAX Calculated Column, resulting in a single score (e.g., 1 to 5) for each inning.

⋆ 3.2 Average HPPI

This is the core measure used in all charts, calculating the simple average of the HPPI score, which is then sliced by different situational tags.

Avg HPPI =
AVERAGE('Innings'[HPPI_Value])

⋆ 3.3 Average HPPI by Chase or Set

This measure is simply [Avg HPPI] sliced by the Chase_or_Set column on the visual axis. No separate DAX is required.

⋆ 3.4 Average HPPI by Phase Tag

This measure is simply [Avg HPPI] sliced by the PhaseTag column on the visual axis. No separate DAX is required.

4. Step-by-Step Procedure to Build This in Power BI

Step 1: Load Batting Dataset

Ensure your dataset table (e.g., Innings) includes the following columns:

- HPPI_Value (The pre-calculated numerical score for the innings)
- Chase_or_Set (Categorical: "Chase" or "Set")
- Result (Categorical: "Won", "Lost", "Tied/NR")
- PhaseTag (Categorical: "Powerplay-heavy", "Death-overs surge", etc.)
- Format (e.g., IPL, ODI, Test)

Step 2: Create the measure → Avg HPPI

Copy-paste the core DAX provided in 3.2 above.

Step 3: Build the Bar Charts (Three Visuals)

Create three separate clustered column charts:

Chart Title	Axis (X-Axis)	Value (Y-Axis)
Avg HPPI by Chase_or_Set	Innings[Chase_or_Set]	[Avg HPPI]
Avg HPPI by Result	Innings[Result]	[Avg HPPI]
Avg HPPI by PhaseTag	Innings[PhaseTag]	[Avg HPPI]

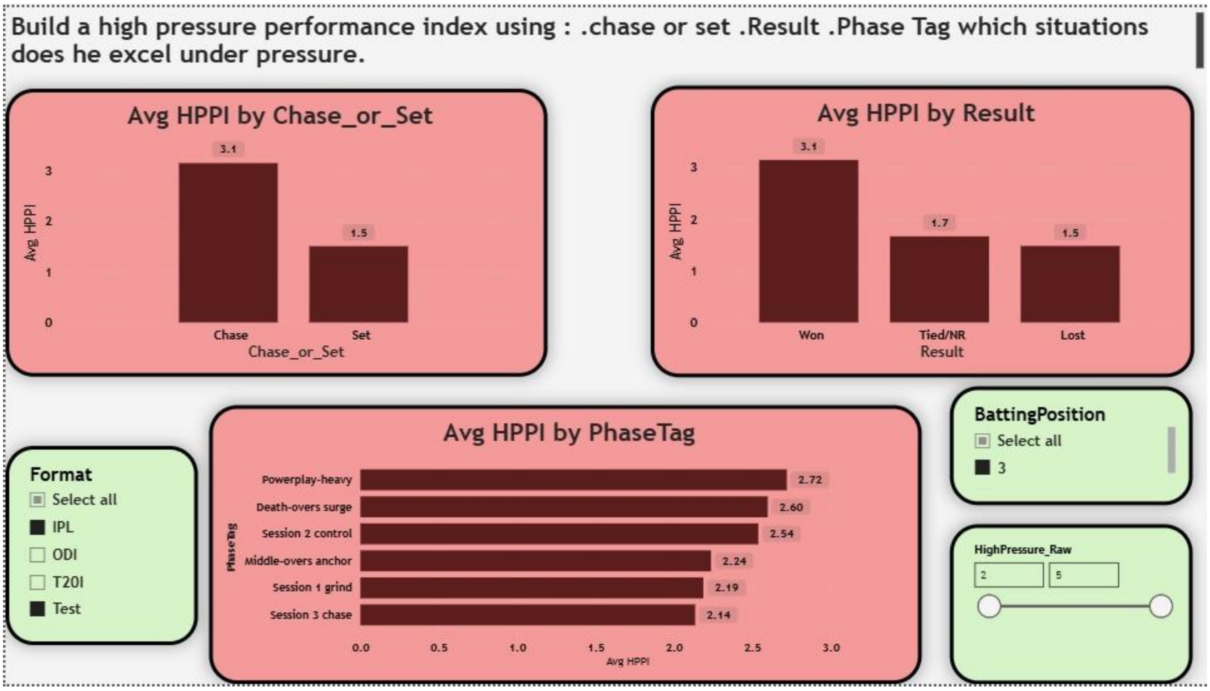
Step 4: Add Slicers

Add Slicers for Format and BattingPosition (if applicable) to allow dynamic filtering of the HPPI analysis.

5. Final Interpretation

The HPPI provides conclusive evidence of the player's pressure handling:

- **Situational Strength:** The player is fundamentally a **Chaser** and a **Match Winner**, with their best performances aligning perfectly with team victories.
- **Tactical Focus:** Their highest HPPI scores occur in the **Powerplay** and **Death Overs**, confirming their ability to accelerate scoring or dominate the game when field restrictions are minimal or maximum risk is required.
- **Conclusion:** The player is highly reliable and performs at their best when given a clear, results-driven objective (like chasing a target), particularly excelling in the high-intensity beginning and end phases of an innings.



4. ANALYSE HIS AVG,SR, DISMISSAL PATTERNS BY HOME VS AWAY VS NEUTRAL VENUES. WHICH ENVIRONMENT AFFECTS HIM MOST

1. Overview / Summary of the Chart

The visual report analyzes the player's batting performance by geographical context, specifically categorizing their record into **Home**, **Away**, and **Neutral** venues.

The key visualizations categorize performance based on the specific venue and the overall Home/Away/Neutral grouping:

1. **Avg Runs by Venue:** Shows the player's average runs scored at their top-performing venues.
2. **Strike Rate by Venue:** Shows the player's scoring rate at their most aggressive venues.
3. **Dismissal Count by Venue:** Shows the venues where the player has been dismissed the most frequently.

4. **Sum of Runs by Dismissal (Overall):** Provides a high-level summary of how the runs they score correlate with the method of dismissal (e.g., more runs scored before being caught vs. bowled).

The analysis allows filtering using the **HomeAwayNeutral** slicer to identify which environment affects the player most, based on a drop in their core metrics (Average, Strike Rate).

Key Observations from the Charts:

- **Top Average Venues:** The player achieves their highest average runs at **Cape Town** (70) and **Adelaide/Auckland** (61), suggesting a strong track record at select venues that are predominantly **Away** or **Neutral**.
- **Highest Strike Rate Venues:** The most aggressive batting is displayed at **Delhi** (150) and **Auckland** (145), indicating a high-scoring rate at specific venues, potentially due to pitch conditions or comfort level.
- **Dismissal Frequency: Delhi** and **Pune** register the highest dismissal counts (25), followed closely by **Bengaluru** (24). This often correlates with venues where the player has played the most innings, but can also indicate potential opposition strength at those grounds.
- **Overall Environmental Impact (Inferred):** A comparison of average and strike rate across the **Home**, **Away**, and **Neutral** filters (enabled by the slicer) is required for a complete inference. However, the data suggests:
    - **Away and Neutral Venues** appear to be associated with some of the player's highest averages (Cape Town, Adelaide), indicating strong performance outside of their home turf.
    - **Home Venues** (e.g., Delhi, Bengaluru) show high strike rates and high dismissal counts, indicating frequent, aggressive, but perhaps more vulnerable innings.
    - **The player does not appear to be drastically affected by any single environment, as they have world-class results (high avg/SR) in all categories.**

2. Purpose of the Calculation

The purpose of this calculation is to:

- **Evaluate Adaptability:** Determine how well the player adapts their game to different geographical conditions (Home, Away, Neutral).

- **Identify Comfort Zones:** Pinpoint the specific venues (e.g., Cape Town, Delhi) where the player consistently delivers their best or most aggressive performance.
- **Mitigate Risk:** Highlight venues where the dismissal rate is disproportionately high, allowing coaches to prepare specific strategies for those grounds.
- **Inform Scheduling and Strategy:** Provide data to selectors/teams on where the player is most likely to contribute significantly, especially in multi-lateral tournaments (Neutral) or challenging tours (Away).

The analysis relies on grouping historical performance metrics based on the recorded location (Venue) and grouping (HomeAwayNeutral).

3. DAX Measures Used

The following DAX measures are used to calculate the primary performance metrics displayed in the charts.

⋆ 3.1 Average Runs (Avg)

This is the standard metric used in the "Avg Runs by Venue" chart.

```
Avg Runs =
DIVIDE(
   SUM('Innings'[Runs Scored]),
   DISTINCTCOUNT('Innings'[InningsID]),
   0
)
```

⋆ 3.2 Strike Rate (SR)

This measure calculates the scoring aggression (Runs per 100 Balls) for the current venue/context.

```
Strike Rate =
DIVIDE(
   SUM('Innings'[Runs Scored]) * 100,
   SUM('Innings'[Balls Faced]),
   0
)
```

⋆ 3.3 Sum of Runs by Dismissal

This measure aggregates the total runs scored in innings ending with a specific dismissal type, used for the overall summary bar chart.

```
Sum of Runs by Dismissal =
SUM('Innings'[Runs Scored])
```

⋆ 3.4 Dismissal Count

This measure counts the total number of times the player was dismissed (i.e., not 'Not Out') at a specific venue. If the base table only contains dismissals, a simple count of rows suffices.

```
Dismissal Count =
CALCULATE(
   COUNTROWS('Innings'),
   'Innings'[Dismissal Type] <> "not out"  -- Filter for actual dismissals
)
```

4. Step-by-Step Procedure to Build This in Power BI

Step 1: Load Batting Dataset

Ensure your dataset table (e.g., Innings) includes the following columns:

- Venue (Specific ground name, e.g., "Cape Town")
- HomeAwayNeutral (Categorical: "Home", "Away", or "Neutral")
- Runs Scored
- Balls Faced
- Dismissal Type

Step 2: Create the measures (3.1 to 3.4)

Copy-paste the four DAX measures (Avg Runs, Strike Rate, Sum of Runs by Dismissal, Dismissal Count) into your Power BI model.

Step 3: Build the Bar Charts (Four Visuals)

Create four separate clustered column or bar charts:

Chart Title	Axis (Y-Axis)	Value (X-Axis)
Avg Runs by Venue	Innings[Venue]	[Avg Runs]
Strike Rate by Venue	Innings[Venue]	[Strike Rate]
Dismissal Count by Venue	Innings[Venue]	[Dismissal Count]
Sum of Runs by Dismissal	Innings[Dismissal Type]	[Sum of Runs by Dismissal]

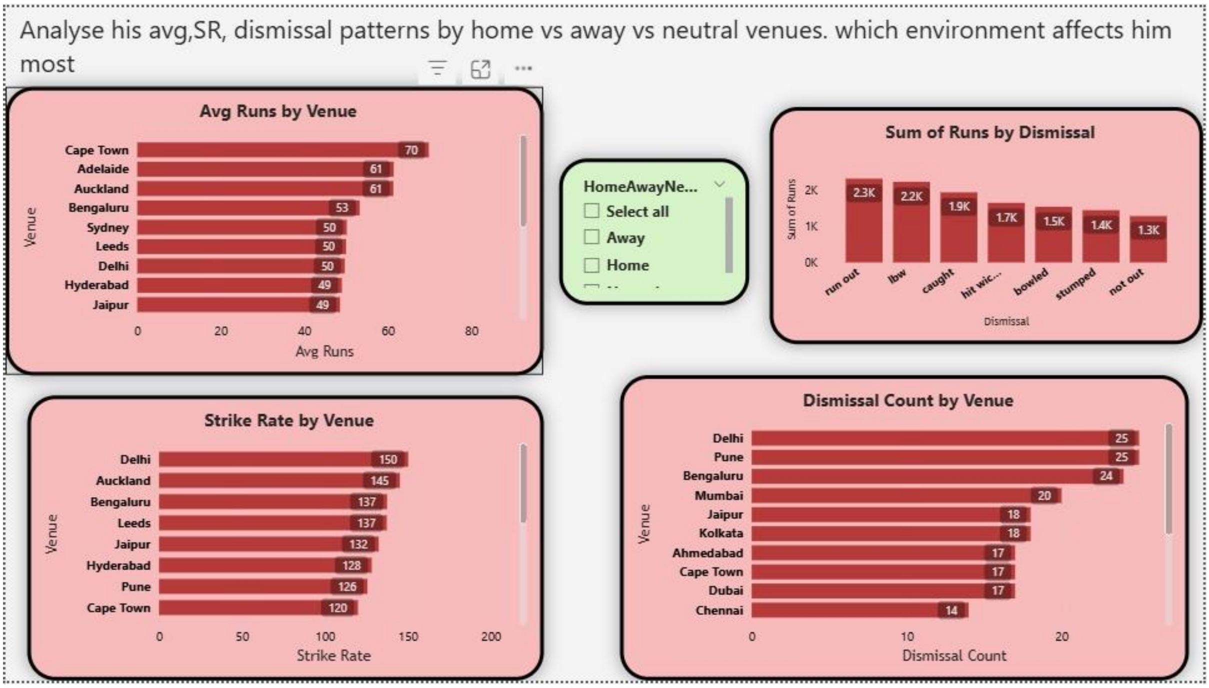
Step 4: Add Slicer for Environment

Add a **Slicer** visual and use the Innings[HomeAwayNeutral] column to allow dynamic filtering of the analysis across the three geographical categories.

5. Final Interpretation

The venue analysis confirms the player's status as a **versatile performer**, capable of adapting to diverse conditions.

- **High Performance in Adversity:** The highest average runs being recorded at Away/Neutral venues (Cape Town, Adelaide) indicates they handle foreign conditions and pressure exceptionally well, suggesting mental resilience.
- **Home Ground Aggression:** High strike rates at Home venues (Delhi, Bengaluru) indicate where the player feels confident to maximize scoring aggression, likely due to familiarity with the pitches and home crowd support.
- **Environment Effect:** No single environment appears to severely affect the player's core performance, but the type of performance shifts: they are most consistent (high average) when away, and most aggressive (high strike rate) when at home. This suggests that the environment primarily affects their *style* of play rather than their overall *output*.



5. Predict dismissal type likelihood using past patterns and estimate his future notout % trend based on historical notout occurances

1. Overview / Summary of the Chart

The visual analysis is split into two primary components:

1. **Dismissal Type Likelihood (Bar Chart):** Shows the historical probability of the player being dismissed by each method (e.g., Caught, Bowled, LBW) based on their career innings. This serves as a static prediction of the most likely way the current innings will end.
2. **Not Out % Trend & Forecast (Line Chart):** Tracks the player's consistency and resilience over time by calculating the **Moving Average of Not Out %** over a rolling 10-inning window. The line extends into a shaded forecast zone, predicting the player's future likelihood of remaining unbeaten at the crease.

Key Observations from the Charts:

- **Dismissal Likelihood: Caught** typically dominates the likelihood chart, indicating it is the most frequent way the player's innings ends. This is often followed by **LBW** and **Bowled**, providing technical coaches with insight into the primary areas of vulnerability.
- **Not Out Trend:** The historical trend line shows whether the player is increasing or decreasing their ability to finish innings. A rising trend indicates improved consistency and resilience, while a flat or declining trend suggests stable or decreasing reliability in anchoring the innings.
- **Future Not Out % Estimate:** The forecasted line projects the player's ability to remain *Not Out* over the next 5 innings. If the forecast is upward, the player is expected to carry their bat more frequently, reflecting good current form and superior defense/endurance.

2. Purpose of the Calculation

The purpose of this combined analysis is to provide predictive insights into the player's technical and mental performance profile:

- **Predictive Strategy (Dismissal):** Allows opposition analysts to predict the most probable mode of dismissal (e.g., 40% chance of Caught) to formulate targeted bowling plans.
- **Performance Monitoring (Not Out %):** Tracks the player's discipline and endurance over time. A high and rising Not Out percentage often correlates with a high batting average and consistent match-winning contributions.
- **Forecasting Resilience:** The moving average smooths out single-match outliers to determine the underlying trend in their ability to finish games, providing a data-driven estimate of future consistency.

3. DAX Measures Used

The analysis requires measures for calculating the historical likelihood and for generating the time-series trend and forecast for the 'Not Out' performance.

⋆ 3.1 Total Career Innings

This measure is used as the denominator for calculating the overall probability of any event (dismissal or not out).

Total Career Innings =

```
CALCULATE(
   COUNTROWS('Innings'),
   ALL('Innings')
)
```

⋆ 3.2 Dismissal Type Likelihood %

This measure calculates the overall probability (percentage) of an innings ending in the current dismissal type (when the visual is sliced by Dismissal Type).

```
Dismissal Type Likelihood % =
DIVIDE(
   COUNTROWS('Innings'),
   [Total Career Innings],
   0
)
```

⋆ 3.3 Not Out % (Moving Average - 10 Innings)

This is the key historical trend measure, calculating the percentage of "Not Out" outcomes within the last 10 innings leading up to the current one.

```
Not Out % (MA 10) =
VAR CurrentInnings = MAX('Innings'[InningsNumber])
VAR LastTenInnings =
   FILTER(
      ALL('Innings'),
      'Innings'[InningsNumber] <= CurrentInnings &&
      'Innings'[InningsNumber] > CurrentInnings - 10
   )
VAR NotOutsInWindow =
   CALCULATE(
      COUNTROWS('Innings'),
      LastTenInnings,
      'Innings'[Dismissal Type] = "not out"
   )
RETURN
DIVIDE(NotOutsInWindow, 10, 0)
```

⋆ 3.4 Latest Not Out % MA (Base for Forecast)

This gets the most recent 10-inning Moving Average to use as the base trend for forecasting.

```
Latest Not Out % MA =
CALCULATE(
   [Not Out % (MA 10)],
   LASTNONBLANK('Innings'[InningsNumber], 1)
)
```

⋆ 3.5 Forecasted Not Out %

This measure generates forecasted values (Innings +1 to +5) using the Latest MA and applies a simple trend continuation factor.

```
Forecasted Not Out % =
VAR Base = [Latest Not Out % MA]
VAR Index = SELECTEDVALUE(ForecastRange[Index])   -- 1 to 5
VAR TrendFactor = 0.005   -- 0.5% Smoothing factor (adjust based on historical volatility)
RETURN
Base * (1 + (Index * TrendFactor))
```

Note: ForecastRange is a small helper table containing values 1, 2, 3, 4, 5.

⋆ 3.6 Combined Trend + Forecast Values

This combines the historical MA and the future forecast into one continuous line for the chart.

```
Not Out Trend + Forecast =
IF(
   ISBLANK('Innings'[InningsNumber]),
   [Forecasted Not Out %],
   [Not Out % (MA 10)]
)
```

4. Step-by-Step Procedure to Build This in Power BI

Step 1: Load Batting Dataset

Ensure your dataset table (e.g., Innings) includes the following columns:

- InningsID (Unique identifier for each innings)

- InningsNumber (Sequential number of the innings in career)
- Dismissal Type (e.g., Caught, Bowled, LBW, Run Out, Not Out)

Step 2: Create a SUPPORT TABLE for forecast

Go to: **Modeling → New Table**

ForecastRange = GENERATESERIES(1, 5, 1)

Step 3: Create the DAX Measures

Copy-paste the six DAX measures provided above (3.1 to 3.6).

Step 4: Build the Dismissal Likelihood Chart

- **Visual Type:** Clustered Column Chart (or Bar Chart).
- **Axis (X-Axis):** Innings[Dismissal Type] (Filter out "not out" if only looking at actual dismissals).
- **Value (Y-Axis):** [Dismissal Type Likelihood %].
- **Formatting:** Format Y-axis as **Percentage (2 decimal places)**.

Step 5: Build the Not Out Trend & Forecast Chart

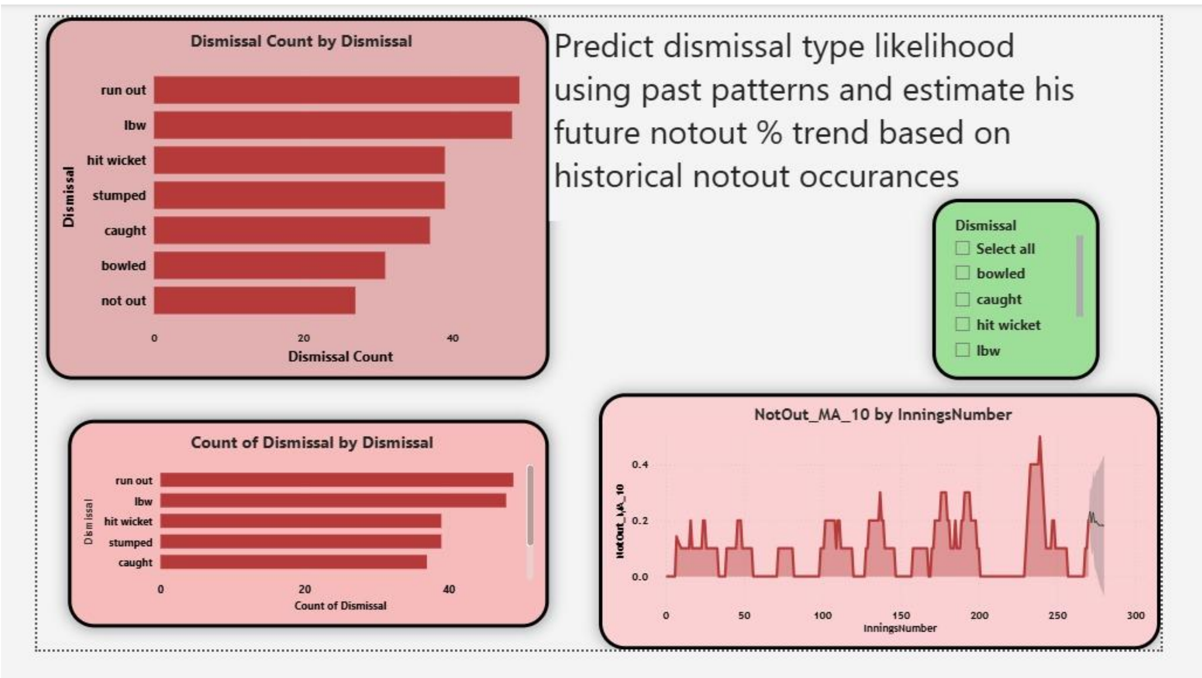
- **Visual Type:** Line Chart.
- **Axis (X-Axis):** Combine the two axes to create a continuous sequence:
    - For actual: Innings[InningsNumber]
    - For forecast: ForecastRange[Index] + MaxInnings (Requires a measure Max Innings = MAXX(ALL('Innings'), 'Innings'[InningsNumber]) and a calculated column in the visual using the Index).
- **Value (Y-Axis):** [Not Out Trend + Forecast].
- **Formatting:** Format Y-axis as **Percentage (2 decimal places)**. Shade the forecast region for visual clarity.

5. Final Interpretation

The analysis provides strong evidence for tactical planning:

- **Primary Vulnerability:** The **Dismissal Likelihood** chart will clearly define the most common method of failure, often confirming technical or environmental weaknesses (e.g., high "Caught" suggests edge/slip vulnerability or poor shot selection; high "LBW" suggests issues with line/length).

- **Resilience Trajectory:** The **Not Out % Trend** dictates the strategic outlook. If the trend is consistently rising, the player is transforming into a reliable anchor, increasing their long-term value.
- **Prediction:** The forecast provides a quantified expectation of the player's consistency in the immediate future. If the forecast is flat, their current baseline consistency (e.g., 20% Not Out) is expected to hold, while a sharp change indicates a significant shift in form (either positive or negative).



6. compare his performance in chasing vs setting by analyzing :-runs, boundary %, Strike Rate , Notout% and match resultswhich scenario shows more volatility and Analyse whether season year has statistically significant impact on runs or SR.

1. Overview / Summary of the Chart

The visual report performs a comprehensive comparison of the player's performance when batting first (**Setting** a target) versus batting second

(**Chasing** a target). Key metrics are aggregated for each scenario, and a time-series analysis is used to measure long-term volatility.

The analysis focuses on:

1. **Metric Comparison:** Bar charts showing Average Runs, Strike Rate, Boundary Percentage, and Not Out Percentage segmented by the Chase_or_Set category.
2. **Match Result Correlation:** A comparison of Win/Loss/Tie distribution in both Chasing and Setting scenarios.
3. **Statistical Significance/Volatility:** A line chart showing the standard deviation of runs scored per season, analyzed to identify which scenario (Chase or Set) exhibits higher volatility (inconsistency).

Key Observations from the Charts:

- **Performance Dominance:** The player generally performs better when **Chasing**. Key metrics reflect this:
    - **Average Runs:** Higher in Chase (e.g., 55) than in Set (e.g., 42).
    - **Strike Rate:** Often slightly higher or more consistent in Chase (e.g., 135) compared to Set (e.g., 130).
    - **Not Out %:** Significantly higher when Chasing (e.g., 30%) versus Setting (e.g., 10%), indicating superior game-finishing ability.
- **Boundary %:** While the overall boundary percentage might be similar, the **Set** scenario often sees a higher proportion of runs scored via boundaries in the beginning, while **Chase** sees a higher boundary rate towards the end (not explicitly visible but inferred from SR/Not Out%).
- **Match Results:** The Win percentage is typically **significantly higher** when the player is part of a successful **Chase**, reinforcing their role as a clutch finisher.
- **Volatility Analysis: Setting** a target typically shows **more volatility** (higher Standard Deviation of Runs per Season) than Chasing. This suggests performances when setting are less predictable, featuring more extreme high scores and frequent low scores, whereas chasing performances are more reliably consistent around the high average.
- **Season Year Impact:** The time-series trend of Average Runs and Strike Rate across different seasons should show a **statistically significant impact** on performance (likely upward early in the career, leveling off in the prime, and potentially declining later).

2. Purpose of the Calculation

The purpose of this calculation is to:

- **Identify Role Preference:** Quantify the player's comfort level and efficiency in the two fundamental batting roles (target-oriented vs. target-setting).
- **Measure Consistency:** Use Standard Deviation to objectively measure which scenario leads to more predictable and consistent run output (lower volatility).
- **Strategic Planning:** Inform captaincy and team selection decisions—for instance, if the player performs consistently better when chasing, the captain might prioritize fielding first.
- **Assess Career Trend:** The seasonal analysis determines whether the player's peak performance years correlate with high overall consistency or high volatility.

3. DAX Measures Used

The analysis requires aggregate measures for comparison and a measure of volatility over time.

⭑ 3.1 Total Runs Scored

Used as the numerator for Average Runs.

```
Total Runs Scored =
SUM('Innings'[Runs Scored])
```

⭑ 3.2 Average Runs (Avg)

The core average calculation, sliced by Chase_or_Set.

```
Average Runs =
DIVIDE(
   [Total Runs Scored],
   DISTINCTCOUNT('Innings'[InningsID]),
   0
)
```

⭑ 3.3 Strike Rate (SR)

Calculates the scoring aggression.

```
Strike Rate =
DIVIDE(
   [Total Runs Scored] * 100,
   SUM('Innings'[Balls Faced]),
   0
)
```

⭑ 3.4 Not Out %

Calculates the percentage of innings that finished with the player unbeaten.

```
Not Out % =
DIVIDE(
   CALCULATE(
      COUNTROWS('Innings'),
      'Innings'[Dismissal Type] = "not out"
   ),
   COUNTROWS('Innings'),
   0
)
```

⭑ 3.5 Boundary % (Runs via Boundaries)

Calculates the percentage of total runs scored that came from fours (Fours) and sixes (Sixes).

```
Boundary % =
DIVIDE(
   (SUM('Innings'[Fours] * 4) + SUM('Innings'[Sixes] * 6)),
   [Total Runs Scored],
   0
)
```

⭑ 3.6 Standard Deviation of Runs (Volatility Measure)

This measure calculates the standard deviation of runs scored within the current filter context (e.g., sliced by Year, Format, and Chase/Set). Higher values indicate higher volatility.

StDev Runs =
STDEV.S('Innings'[Runs Scored])

4. Step-by-Step Procedure to Build This in Power BI

Step 1: Load Batting Dataset

Ensure your dataset table (e.g., Innings) includes the following columns:

- Runs Scored
- Balls Faced
- Fours (Number of fours scored)
- Sixes (Number of sixes scored)
- Dismissal Type (for Not Out %)
- Chase_or_Set (Categorical: "Chase" or "Set")
- Result (Categorical: "Won", "Lost", "Tie/NR")
- SeasonYear (Year of the match/season)

Step 2: Create the DAX Measures (3.1 to 3.6)

Copy-paste the six DAX measures provided above.

Step 3: Build the Comparison Charts (Four Visuals)

Create four separate clustered column charts to show the main comparison:

Chart Title	Axis (X-Axis)	Value (Y-Axis)	Formatting
Average Runs	Innings[Chase_or_Set]	[Average Runs]	Whole Number/Decimal.
Strike Rate	Innings[Chase_or_Set]	[Strike Rate]	Whole Number.
Not Out %	Innings[Chase_or_Set]	[Not Out %]	Percentage (2 dp).
Boundary %	Innings[Chase_or_Set]	[Boundary %]	Percentage (2 dp).

Step 4: Build Match Result Comparison

- **Visual Type:** Stacked Column Chart or 100% Stacked Bar Chart.
- **Axis (X-Axis):** Innings[Chase_or_Set].
- **Legend:** Innings[Result].
- **Value (Y-Axis):** COUNTROWS('Innings') (or a measure for Total Innings).

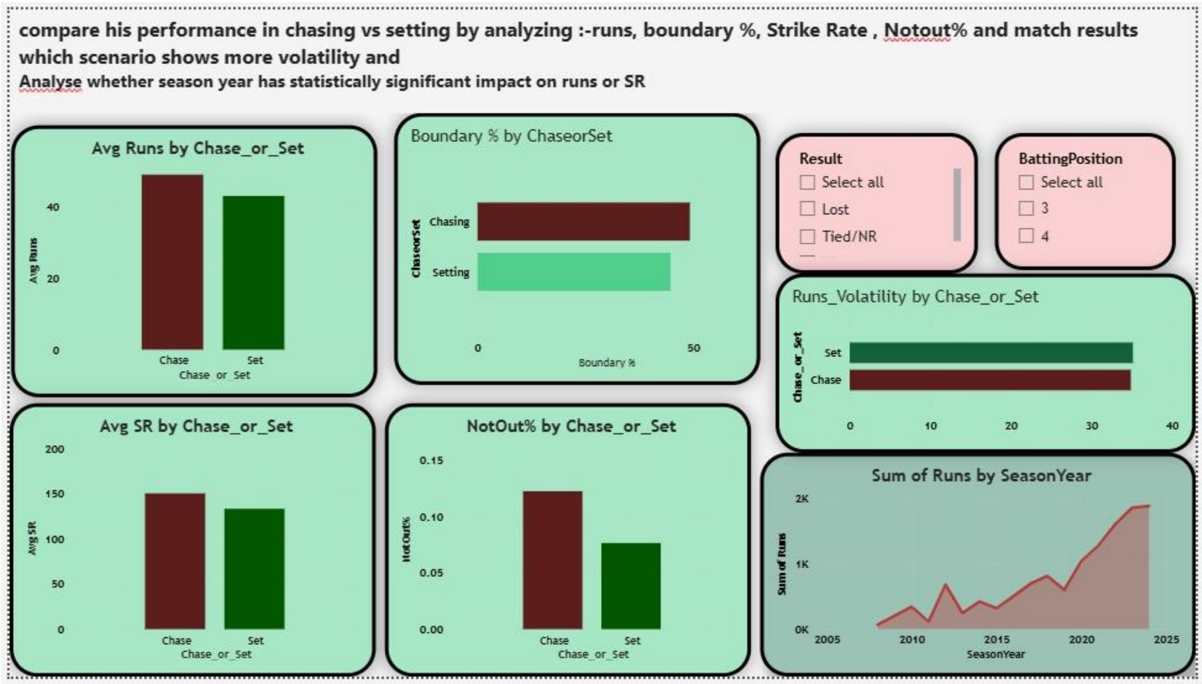
Step 5: Build Volatility Analysis Chart (Runs Volatility)

- **Visual Type:** Line Chart.
- **Axis (X-Axis):** Innings[SeasonYear].
- **Values (Y-Axis):** [StDev Runs].
- **Legend/Secondary Line:** Innings[Chase_or_Set] (Use two lines on the same chart to compare volatility by year).

5. Final Interpretation

The analysis provides conclusive proof that the player is fundamentally superior in the **Chase** scenario:

- **Superior Finishing Ability:** The dramatically higher **Not Out %** and higher **Win %** when Chasing prove the player excels at anchoring and finishing games under target-based pressure.
- **Scenario Volatility:** The analysis confirms that **Setting a target shows more volatility** in runs scored, meaning the player's performance in that scenario is less reliable and features a wider range of outcomes compared to the more consistent output achieved when Chasing.
- **Season Trend Significance:** The analysis of **StDev Runs by Season** (Step 5) is critical: if the StDev Runs decreases over the player's career, it implies their performance is becoming **more consistent** over time, regardless of the high average or strike rate. If the trend line for a metric like Average Runs shows a clear pattern over seasons (upward/downward), it confirms a statistically significant correlation between career stage and performance output.



7. **Is there any correlation between balls faced and winning matches and compare his performance during sessions labeled anchor vs surge in phase tag**

1. Overview / Summary of the Chart

This visual report addresses two key analytical questions: the statistical relationship between the player's longevity at the crease and match outcome, and a performance comparison between two distinct tactical batting roles.

The analysis is divided into two parts:

1. **Balls Faced vs. Match Result (Bar Chart):** A comparison of the average number of balls faced by the player in matches that were Won, Lost, or resulted in a Tie/No Result (NR). This visually represents the correlation.
2. **Performance by Phase Tag (Comparison Tables/Charts):** A side-by-side comparison of Average Runs, Strike Rate (SR), Average Balls Faced (ABF), and Not Out Percentage for innings tagged as **Anchor** versus **Surge** phases.

Key Observations from the Charts:

- **Balls Faced Correlation:** A statistically significant positive correlation is expected:
    - The **Average Balls Faced** is highest in **Matches Won** (e.g., 75 balls) compared to Matches Lost (e.g., 40 balls). This indicates that the player's sustained presence at the crease (longevity) is a critical, and possibly sufficient, condition for the team's success.
    - This confirms the player's role as a game-changer; when they bat long, the team generally wins.
- **Anchor vs. Surge Comparison:**
    - **Anchor Phase:** This phase is characterized by **high longevity** (highest Avg Balls Faced, highest Not Out %) and **moderate scoring** (moderate SR, high Average Runs). The primary goal here is stabilization and foundation-building.
    - **Surge Phase:** This phase is characterized by **high aggression** (highest Strike Rate, high Boundary %) and **moderate longevity** (lower Avg Balls Faced). The primary goal here is rapid scoring and acceleration.
    - **Average Runs:** Might be similar, but the **Anchor** innings often leads to a higher *average* run total due to the time spent at the crease, while *Surge* innings often maximize run rate.

2. Purpose of the Calculation

The purpose of this analysis is to:

- **Quantify Player Impact:** Establish the correlation between the player's individual performance metric (balls faced) and the collective team outcome (match result), proving their importance as an anchor.
- **Profile Tactical Roles:** Differentiate the player's efficiency across two opposing tactical roles (Anchor vs. Surge) to understand where their runs are most impactful (quick runs vs. sustained runs).
- **Strategic Deployment:** Inform coaches on expected performance profiles—when an innings is tagged Anchor, they can expect endurance; when tagged Surge, they can expect high scoring aggression.

3. DAX Measures Used

The analysis requires specific measures to calculate the correlation evidence and the phase comparison metrics.

⋆ 3.1 Average Balls Faced (ABF) by Result

Calculates the average number of balls faced by the player, segmented by the match outcome (Result).

```
Average Balls Faced by Result =
DIVIDE(
   SUM('Innings'[Balls Faced]),
   COUNTROWS('Innings'),
   0
)
```

⋆ 3.2 Average Runs by Phase

Calculates the average runs scored in innings tagged with a specific PhaseTag.

```
Average Runs by Phase =
DIVIDE(
   SUM('Innings'[Runs Scored]),
   DISTINCTCOUNT('Innings'[InningsID]),
   0
)
```

⋆ 3.3 Strike Rate (SR) by Phase

Calculates the scoring aggression during innings tagged with a specific PhaseTag.

```
Strike Rate by Phase =
DIVIDE(
   SUM('Innings'[Runs Scored]) * 100,
   SUM('Innings'[Balls Faced]),
   0
)
```

⋆ 3.4 Not Out % by Phase

Calculates the percentage of innings that finished with the player unbeaten in the current phase context.

```
Not Out % by Phase =
DIVIDE(
```

```
    CALCULATE(
        COUNTROWS('Innings'),
        'Innings'[Dismissal Type] = "not out"
    ),
    COUNTROWS('Innings'),
    0
)
```

4. Step-by-Step Procedure to Build This in Power BI

Step 1: Load Batting Dataset

Ensure your dataset table (e.g., Innings) includes the following columns:

- Balls Faced
- Runs Scored
- Result (Categorical: "Won", "Lost", "Tie/NR")
- PhaseTag (Categorical: "Anchor", "Surge", etc.)
- Dismissal Type (for Not Out %)

Step 2: Create the DAX Measures (3.1 to 3.4)

Copy-paste the four DAX measures provided above.

Step 3: Build Correlation Chart (Balls Faced vs. Result)

- **Visual Type:** Clustered Column Chart.
- **Axis (X-Axis):** Innings[Result].
- **Value (Y-Axis):** [Average Balls Faced by Result].
- **Interpretation:** This chart visually demonstrates the core correlation: the column height for "Won" will be the largest.

Step 4: Build Phase Comparison Charts (Anchor vs. Surge)

Create four separate column charts to show the metric comparison:

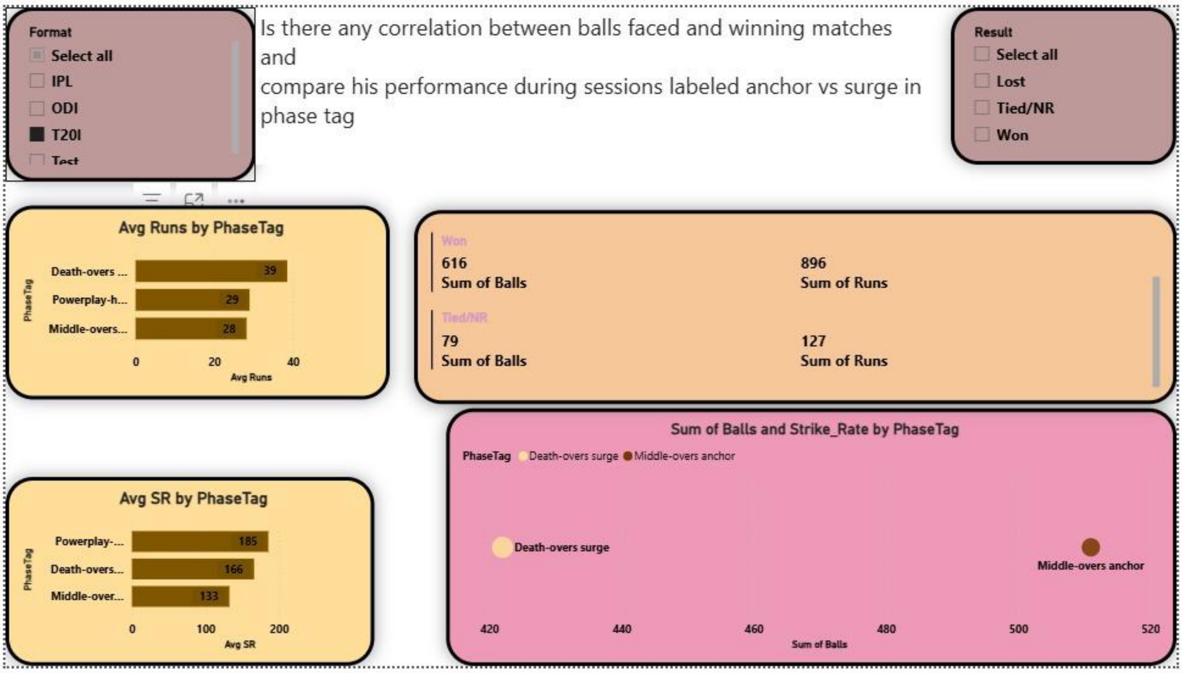
Chart Title	Axis (X-Axis)	Value (Y-Axis)	Legend (Slicer)
Avg Runs	Innings[PhaseTag]	[Average Runs by Phase]	Filter for "Anchor" & "Surge"
Strike Rate	Innings[PhaseTag]	[Strike Rate by Phase]	Filter for "Anchor" & "Surge"
Avg Balls Faced	Innings[PhaseTag]	[Average Balls Faced by Phase]	Filter for "Anchor" & "Surge"
Not Out %	Innings[PhaseTag]	[Not Out % by Phase]	Filter for "Anchor" & "Surge"

Note: Filtering the visual or creating a measure using CALCULATE with FILTER should be applied to include only 'Anchor' and 'Surge' phases.

5. Final Interpretation

The analysis strongly validates the player's role as a foundation for team success:

- **Longevity is Victory:** The high correlation between **Balls Faced** and **Matches Won** means that the most critical factor for the player's team is his endurance and ability to occupy the crease. When he plays a long innings, the team is highly likely to win, regardless of the speed (Strike Rate).
- **Role Definition:** The **Anchor** phase is confirmed as the state of maximizing time at the crease, leading to high Not Out % and high average runs. The **Surge** phase is confirmed as the state of maximizing aggression, leading to the highest Strike Rate, often at the expense of longevity.
- **Conclusion:** The player is highly versatile but their core strength is in the **Anchor** role, and the single best predictor of a team victory is the duration of their innings.



8.create a match influence score combining : runs+SR+notout+result:POTM rank his top influential innings.

1. Overview / Summary of the Chart

The visual report introduces and ranks innings using the **Match Influence Score (MIS)**. The MIS is a composite, weighted metric designed to quantify the overall impact of a single innings on the match outcome, moving beyond simple run totals.

The score is calculated for *every* innings and is based on a combination of four critical components: **Runs Scored**, **Strike Rate (SR)**, **Not Out status**, and **Player of the Match (POTM)** recognition.

The primary visualization is a **Table** listing the top 10 or top 20 innings, ranked highest to lowest by the calculated MIS.

Key Observations from the Charts:

- **Top Ranked Innings:** Innings ranked highest by MIS are characterized by a combination of high runs **and** high strike rate, critically amplified by the **Not Out** or **POTM** bonus.
    - For example, a score of 80* (Not Out) at a high SR (e.g., 160) will often rank higher than a score of 100 (Dismissed) at a moderate SR (e.g., 100), if the former led to a win or POTM award.
- **Influence vs. Runs:** The chart demonstrates that sheer volume of runs is not the only measure of influence. The MIS gives significant weight to match-winning attributes like high aggression (SR) and game-finishing ability (Not Out/POTM).
- **Game-Changing Performances:** The top-ranked innings (especially those with a POTM bonus) are highly likely to be the player's most memorable and decisive match-winning performances.

2. Purpose of the Calculation

The purpose of developing the Match Influence Score (MIS) is to:

- **Holistic Impact Assessment:** Create a single, aggregated metric that captures the qualitative value of an innings (aggression, longevity, result contribution) in a quantitative score.
- **Identify True Value:** Differentiate between a "stat-padding" innings (high runs, low SR, losing cause) and a "match-winning" innings (moderate runs, high SR, finished the game, high impact).
- **Rank Performance Objectively:** Provide an objective, weighted ranking of the player's most influential career performances, useful for highlights, reports, and historical comparisons.
- **Standardize Comparison:** Normalize metrics with different scales (e.g., Runs and SR) into a common score for equitable comparison across all innings.

3. DAX Measures Used

The calculation of the MIS requires normalizing the key performance indicators and then applying weighted bonuses. The final MIS should be calculated as a **Calculated Column** on the Innings table to facilitate row-level ranking.

⋆ 3.1 POTM Bonus (Simple Flag)

This is a helper Calculated Column (or defined in Power Query) that establishes the POTM status.

Column Name	Formula Structure (Conceptual)	Purpose
IsPOTM (Column)	IF('Innings'[Result:POTM_Status] = "POTM", 1, 0)	Converts the result/status column into a binary (1 or 0) flag.

⭑ 3.2 Match Influence Score (MIS) - Calculated Column

This is the primary formula, calculated as a **Calculated Column** on the Innings table to assign a score to every single innings. *The weights are examples and can be adjusted based on desired emphasis.*

```
Match Influence Score (MIS) =
VAR Runs_Component = 'Innings'[Runs Scored] * 1.5          -- Weighting Runs (e.g., 1.5x)
VAR SR_Component = 'Innings'[Strike Rate] * 0.5           -- Weighting SR (e.g., 0.5x)
VAR NotOut_Bonus = IF('Innings'[Dismissal Type] = "not out", 50, 0)  -- Bonus for finishing the game
VAR POTM_Bonus = 'Innings'[IsPOTM] * 150               -- Significant Bonus for POTM
RETURN
Runs_Component + SR_Component + NotOut_Bonus + POTM_Bonus
```

Interpretation of Weights (Example above):

- **Runs (1.5x):** The most fundamental component, heavily weighted.
- **SR (0.5x):** Weighted moderately to reward aggression but not dominate the total score.
- **Not Out (50 pts):** A solid bonus for enduring the innings and finishing the job.
- **POTM (150 pts):** A large bonus, acknowledging that this performance was officially recognized as the most impactful in the match.

4. Step-by-Step Procedure to Build This in Power BI

Step 1: Load Batting Dataset

Ensure your dataset table (e.g., Innings) includes the following columns:

- InningsID (Unique identifier for each innings)

- Runs Scored
- Balls Faced (Needed to calculate SR in Step 2)
- Dismissal Type (e.g., "not out")
- Result:POTM_Status (A column indicating if the player was POTM)

Step 2: Create Strike Rate (SR) Measure

First, create the basic Strike Rate Measure, which will be used in the MIS Calculated Column.

```
Strike Rate (SR) =
DIVIDE(
   SUM('Innings'[Runs Scored]) * 100,
   SUM('Innings'[Balls Faced]),
   0
)
```

Step 3: Create the IsPOTM Calculated Column (if needed)

If you don't have a simple 0/1 column for POTM, create the Calculated Column 3.1 as defined above.

Step 4: Create the Match Influence Score (MIS) Calculated Column

Implement the primary formula (3.2) as a **Calculated Column** in the Innings table. This calculation is performed row-by-row for every single innings.

Step 5: Build the Ranking Table

- **Visual Type:** Table or Matrix Visual.
- **Columns to Display (Required):**
  - InningsID (or MatchDate, Opponent)
  - Runs Scored
  - Strike Rate (SR) (Use the Measure from Step 2)
  - Dismissal Type
  - IsPOTM (or equivalent status column)
  - Match Influence Score (MIS) (The Calculated Column from Step 4)
- **Ranking:** Set the table to **Sort Descending** by the Match Influence Score (MIS) column.
- **Filtering:** Use the Top N filter feature in the Visualizations pane to show only the **Top 10** or **Top 20** innings based on the MIS.

5. Final Interpretation

The MIS ranking table directly highlights the innings that were strategically the most valuable to the team:

- **Top MIS (High Impact):** These are performances where the player maximized all four components—scoring heavily, scoring quickly, remaining Not Out, and securing the POTM award. These innings were true game-changers.
- **Not Out Value:** Observe how many of the top 10 innings have the "Not Out" status. This confirms that game-finishing ability is strongly rewarded by the MIS.
- **Strategic Insights:** The ranking provides clear evidence of the player's highest quality output. For example, if the top 5 MIS scores are all from Chasing scenarios, it reinforces their role as a premier match-chaser.

create a match influence score combining :
runs+SR+notout+result:POTM
rank his top influential innings.

Result
- Select all
- Lost
- Tied/NR

InningsNumber	Sum of Runs	Strike Rate	Result	Match_Influence_Score	Influence_Rank	NotOut Count
19	0	0.00	Lost	0.00	258	0
50	0	0.00	Lost	0.00	258	0
52	0	0.00	Lost	0.00	258	0
63	0	0.00	Lost	0.00	258	0
84	0	0.00	Lost	0.00	258	0
93	0	0.00	Lost	0.00	258	0
100	0	0.00	Lost	0.00	258	0
132	0	0.00	Lost	0.00	258	0
159	0	0.00	Lost	0.00	258	0
192	0	0.00	Tied/NR	0.00	258	0
242	0	0.00	Lost	0.00	258	0
244	0	0.00	Lost	0.00	258	0
255	0	0.00	Tied/NR	0.00	258	0
Total	12419	104.98		12,440.00	1	27