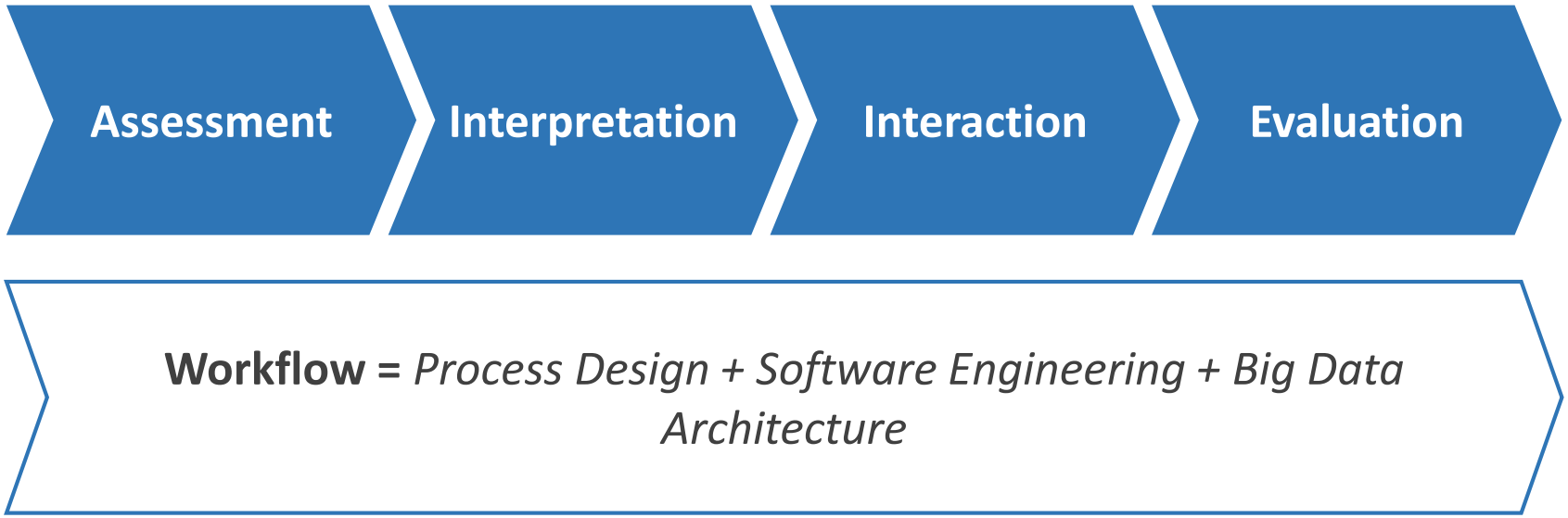
Does Big Data Deliver? Identifying and Addressing At-Risk Players

Wednesday 19th April 2017

Simo Dragicevic, Chief Executive Officer

BetBuddy

Components of Responsible Gambling Analytics



BetBuddy

Traditional = Rules and thresholds

Pros

- Easy to understand
- Easy to build and implement
- Human experience applied.

Cons

- Cannot model non-linear patterns
- Thresholds can focus on extremes
- Widening net increases false positives.

New = Systems that learn from data

Pros

- Can model complex, non-linear behaviour
- Accuracy enables wider net to be cast
- Can be automated, efficiency gains.

Cons

- Requires expertise in new technical areas
- Complex and can contain hidden biases
- ‘Ground truth’ - Harm data not collected.

BetBuddy

Traditional = Absolute indicators

- **Losses**
  - How much have I lost at a point in time?
- **Frequency**
  - How often have I gambled during a period?
- **Payment Behaviours…**

New = Advanced indicators

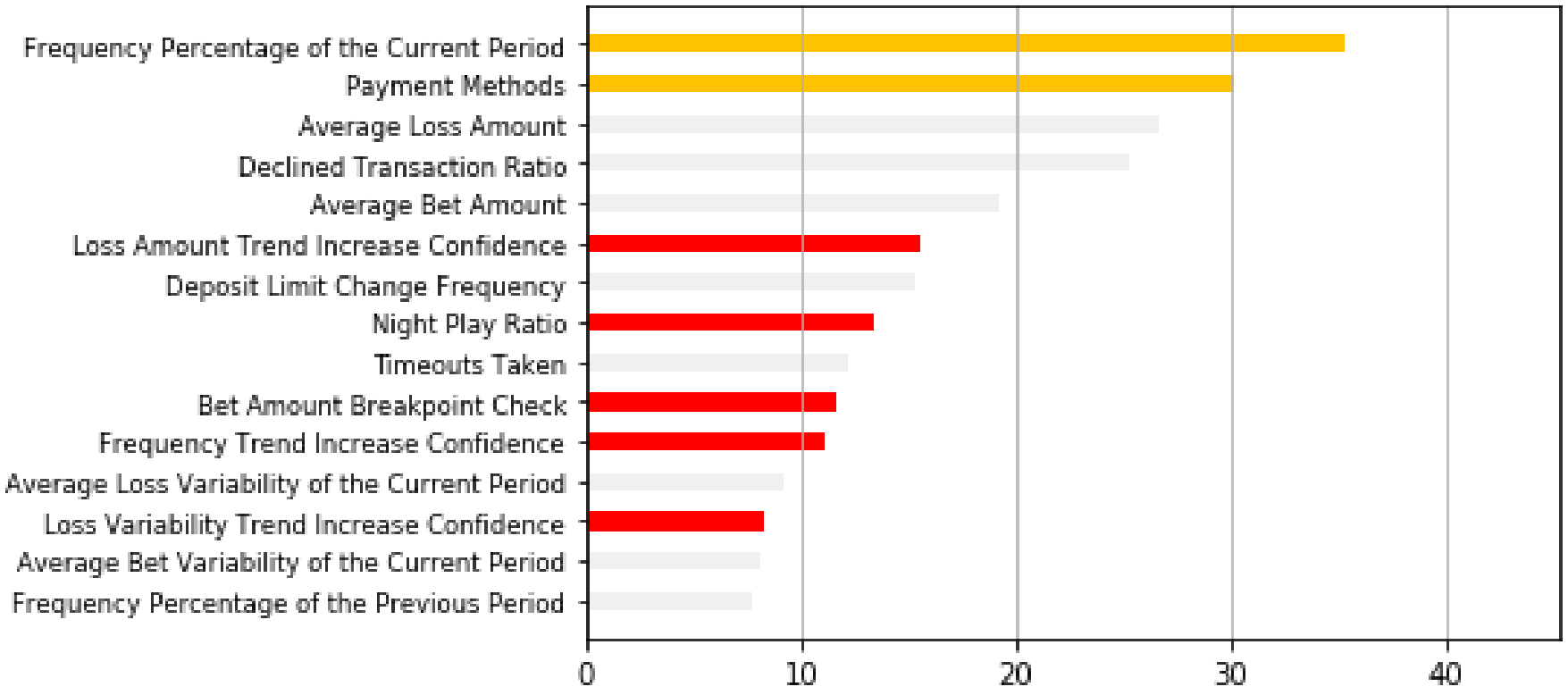
- **Losses**
  - Are my losses increasing over time?
  - Are changes in losses likely to continue?
  - At what rate are my losses increasing?
  - Are my losses consistent or erratic?
  - Am I chasing losses?
- **Frequency**
  - Are my gambling visits increasing?
  - Are visits likely to continue increasing?
  - Do I gamble continuously?
  - Am I gambling during unsociable hours?
  - Is my time increasing when I gamble?
- **Payment Behaviours…**

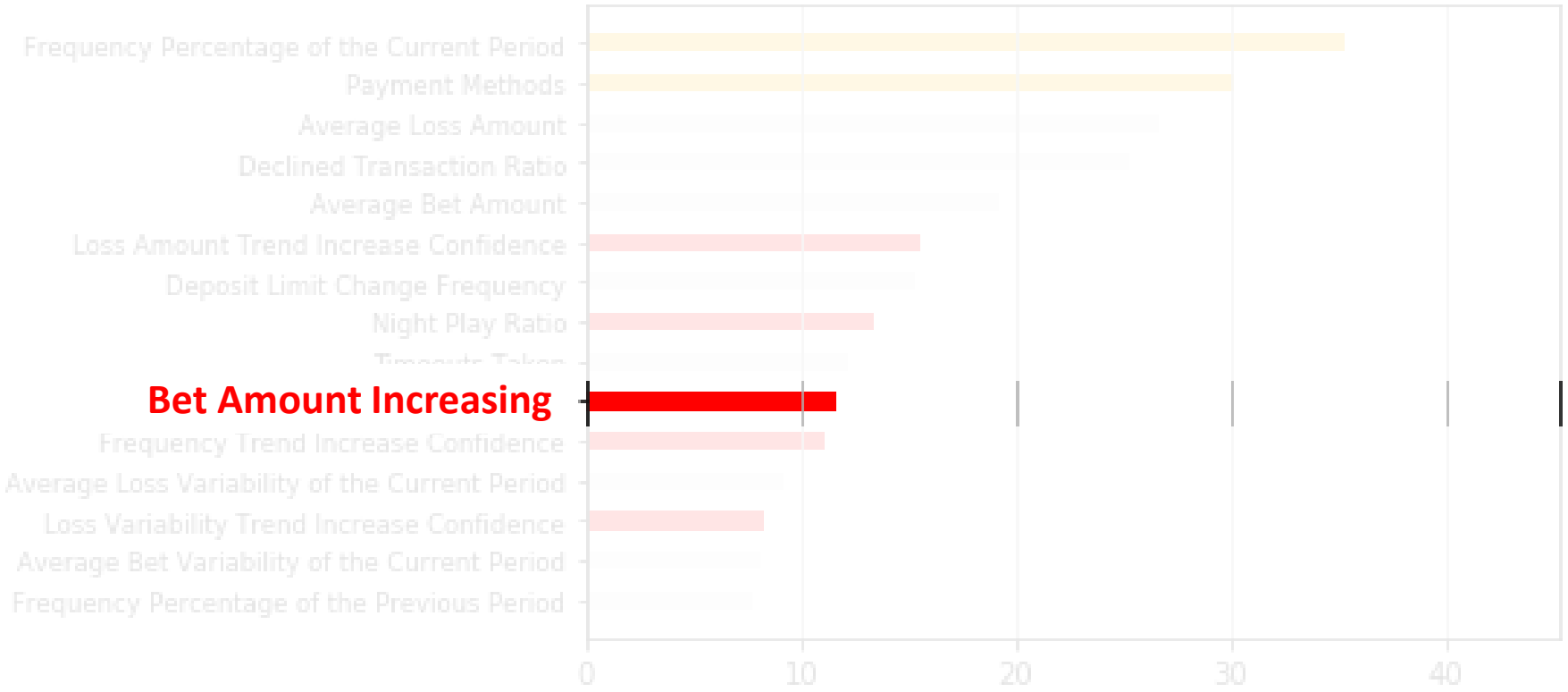
BetBuddy

Outputs from a complex machine learning model i.e., 51 input variables – many highly engineered, 300 decision trees, and up to ~5,000 decision points for each player classification

Example of a High Risk Gambler

Most Important Variables (Top 15 of 51)

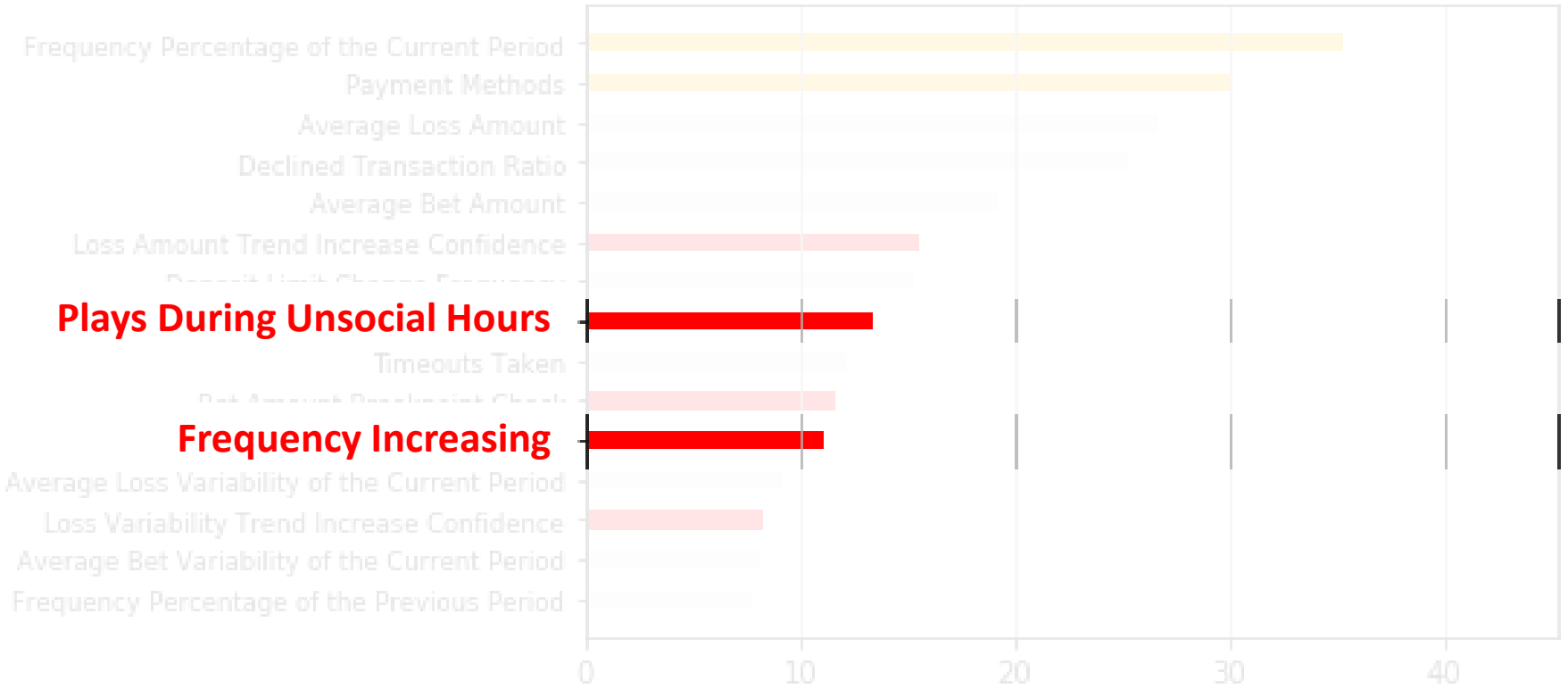




Why is this player at risk?

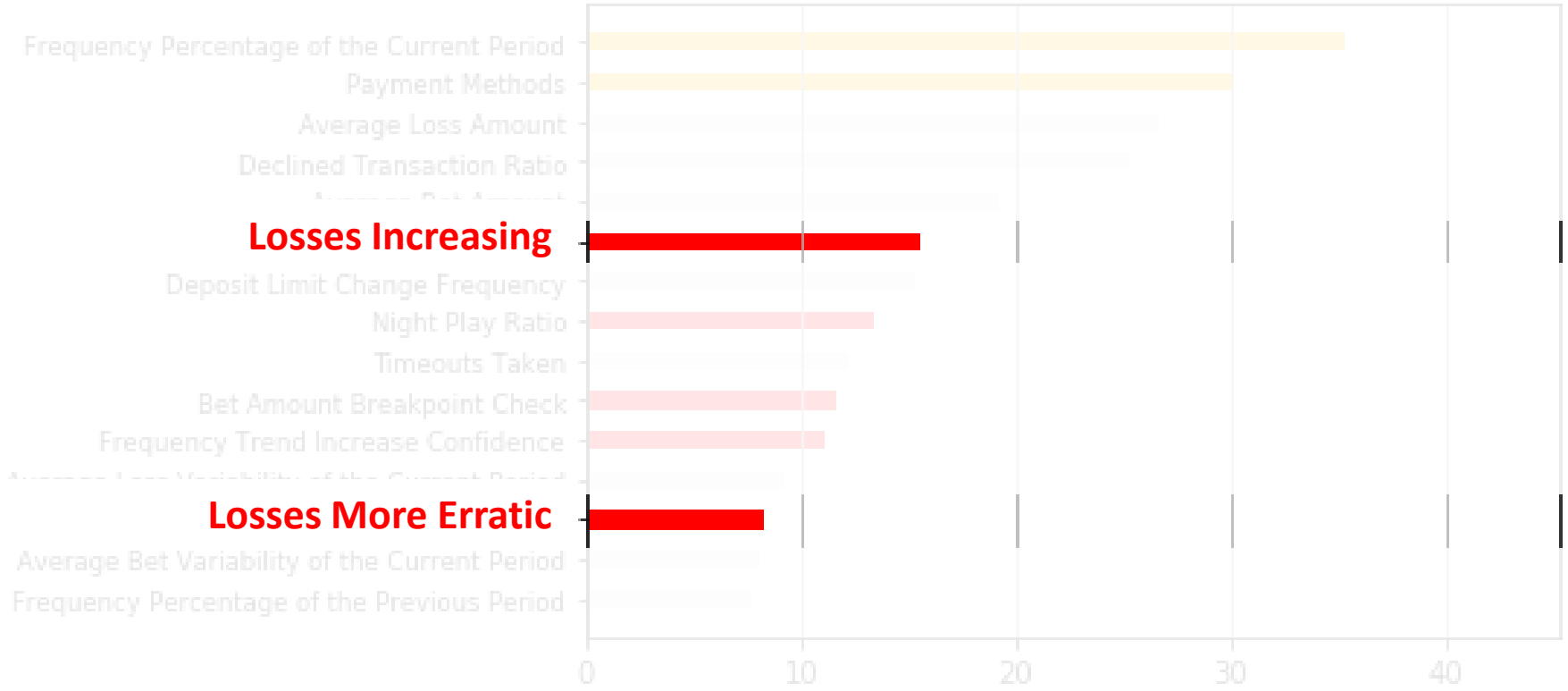
- **Increasing bet amounts**

BetBuddy



Why is this player at risk?

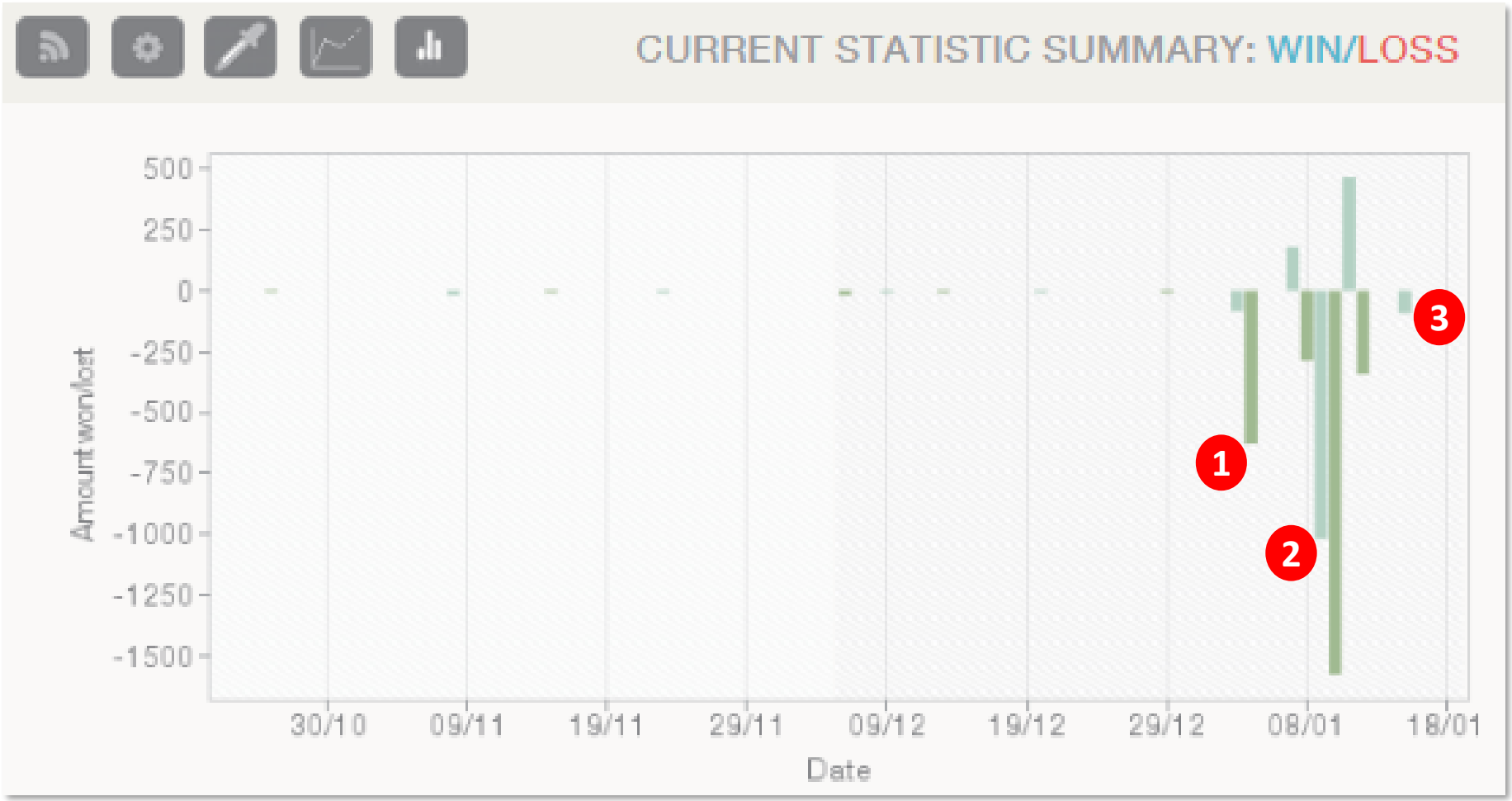
- Increasing bet amounts
- **Gambling more frequently than usual and during unsociable hours**



Why is this player at risk?

- Increasing bet amounts
- Gambling more frequently than usual and during unsociable hours
- **Experiencing increased and variable losses**

BetBuddy



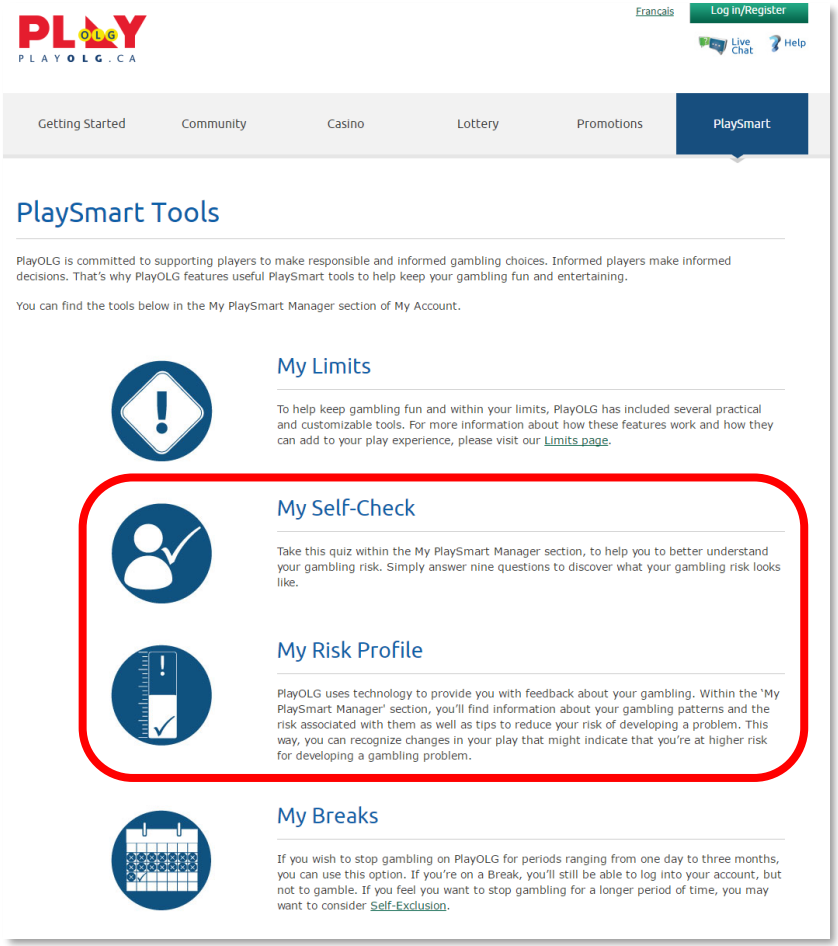
1. Educate about loss chasing and suggest using RG tools e.g., loss limits?
2. Cease marketing? Further educate on RG tools e.g., take a break?
3. Nothing?

BetBuddy

RG Interactions – Lots to Consider…

- **Message Channel**
  - Email, Gaming channel, Telephone, SMS
- **Message Type**
  - Short, Long, Personalised, General, Normative
- **Message Strategy**
  - Single, Multiple, Same v. Different, Just RG v. Positive Play
- **Providing Player Risk Profiles**
- **Providing Self-Assessments**
- **Personalising Marketing**
  - Sustainable marketing, Social marketing i.e., RG features.

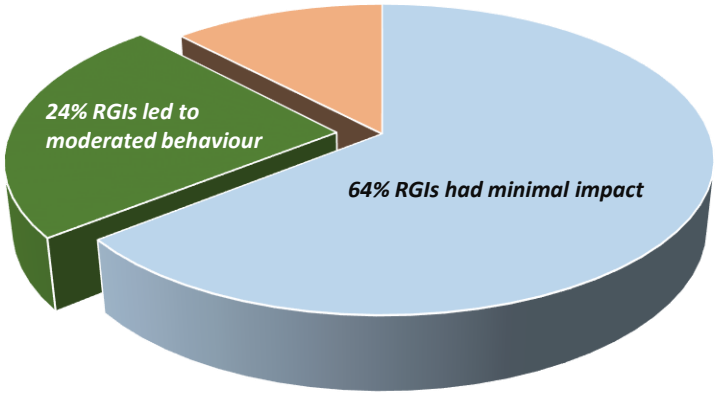
PlayOLG RG Tools



Do Responsible Gambling interactions (RGIs) achieve desired changes in behaviour? Early evaluation testing results from PlayOLG

- ~97,000 RGIs on PlayOLG during 2015/16 (viewed risk profile or self-test result)
- We wanted to know if RGIs have a positive impact on player behaviour
- Initially focused on a small subset of RGIs that met certain criteria e.g.,
  - active players
  - who used RGIs regularly (e.g., at least quarterly), and
  - who were rated either moderate or high risk at the time of the RGI
- Tested underlying behaviour (bet amount) in period leading up to the RGI and period after it.

Impact of RGIs on Behaviour (n = 1,455)



- 24% led to a moderation in underlying behaviour (i.e., improvement)
- 64% had minimal impact
- 12% led to an increase in underlying behaviour
- Whilst we cannot generalise, encouraging early indications RGIs can potentially help players.

Takeaways

Assessment

Combining expert systems and machine learning systems provides very promising opportunities to understand harm using data

Takeaways

Assessment

Combining expert systems and machine learning systems provides very promising opportunities to understand harm using data

Interpretation

Whilst AI and machine learning have tremendous benefits, it's critical to build transparency into any system that can explain results

Takeaways

Assessment

Combining expert systems and machine learning systems provides very promising opportunities to understand harm using data

Interpretation

Whilst AI and machine learning have tremendous benefits, it's critical to build transparency into any system that can explain results

Interaction

You will only get better through continuous experimentation and testing

Takeaways

Assessment

Combining expert systems and machine learning systems provides very promising opportunities to understand harm using data

Interpretation

Whilst AI and machine learning have tremendous benefits, it's critical to build transparency into any system that can explain results

Interaction

You will only get better through continuous experimentation and testing

Evaluation

Encourage a culture of labelling and collecting data, both obvious (e.g., harm) and non-obvious data (e.g., data exhaust)

Takeaways

Assessment

Combining expert systems and machine learning systems provides very promising opportunities to understand harm using data

Interpretation

Whilst AI and machine learning have tremendous benefits, it's critical to build transparency into any system that can explain results

Interaction

You will only get better through continuous experimentation and testing

Evaluation

Encourage a culture of labelling data and collecting, both obvious (e.g., harm) and non-obvious data (e.g., data exhaust)

Workflow

Even more difficult than building models using AI and machine learning is integrating them into day-to-day business processes

Audience Discussion

Does using RG analytics strengthen the operator from a duty of care perspective or make it more vulnerable?