

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

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## Components of Responsible Gambling Analytics

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**Workflow** = *Process Design + Software Engineering + Big Data Architecture*

## 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.

## Traditional = Absolute indicators

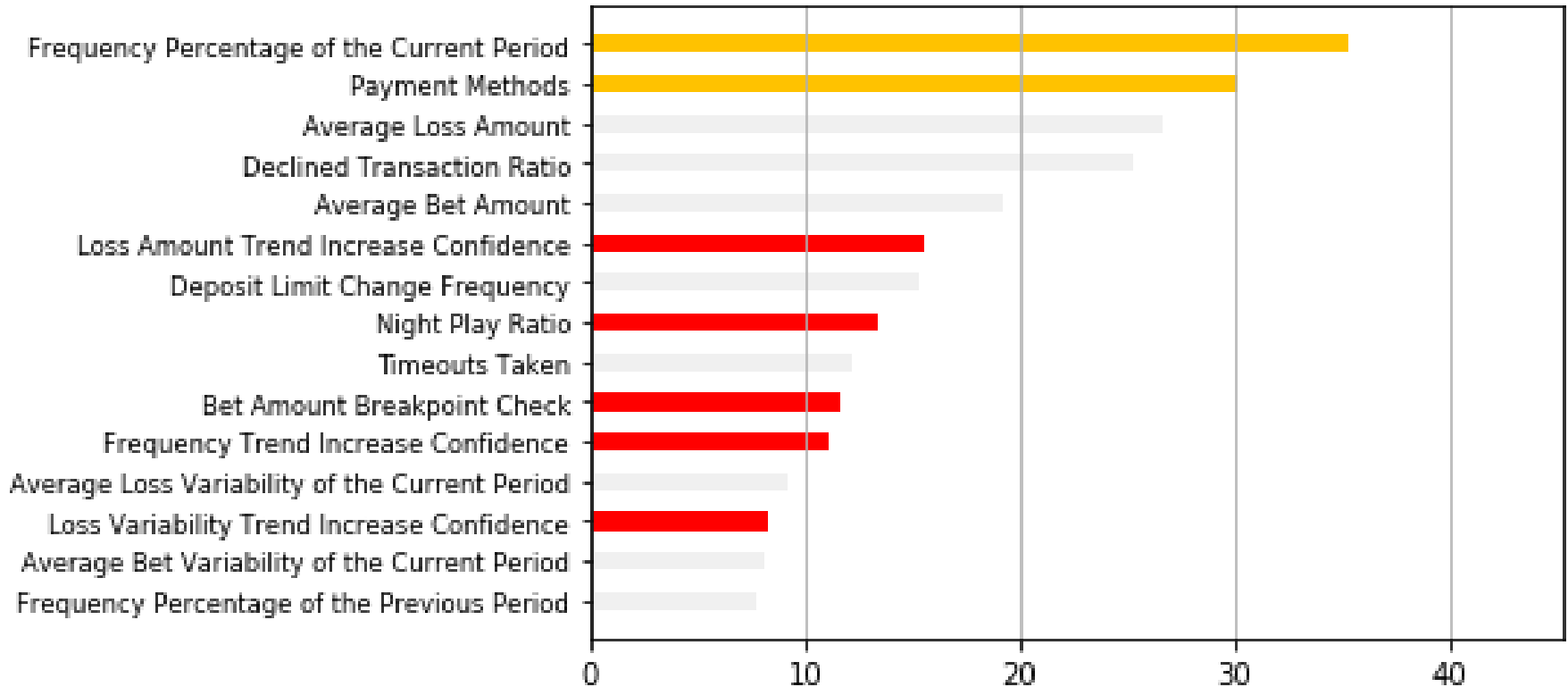
- **Losses**
  - How much have I lost at a point in time?
- **Frequency**
  - How often have I gambled during a period?
- **Payment Behaviours...**

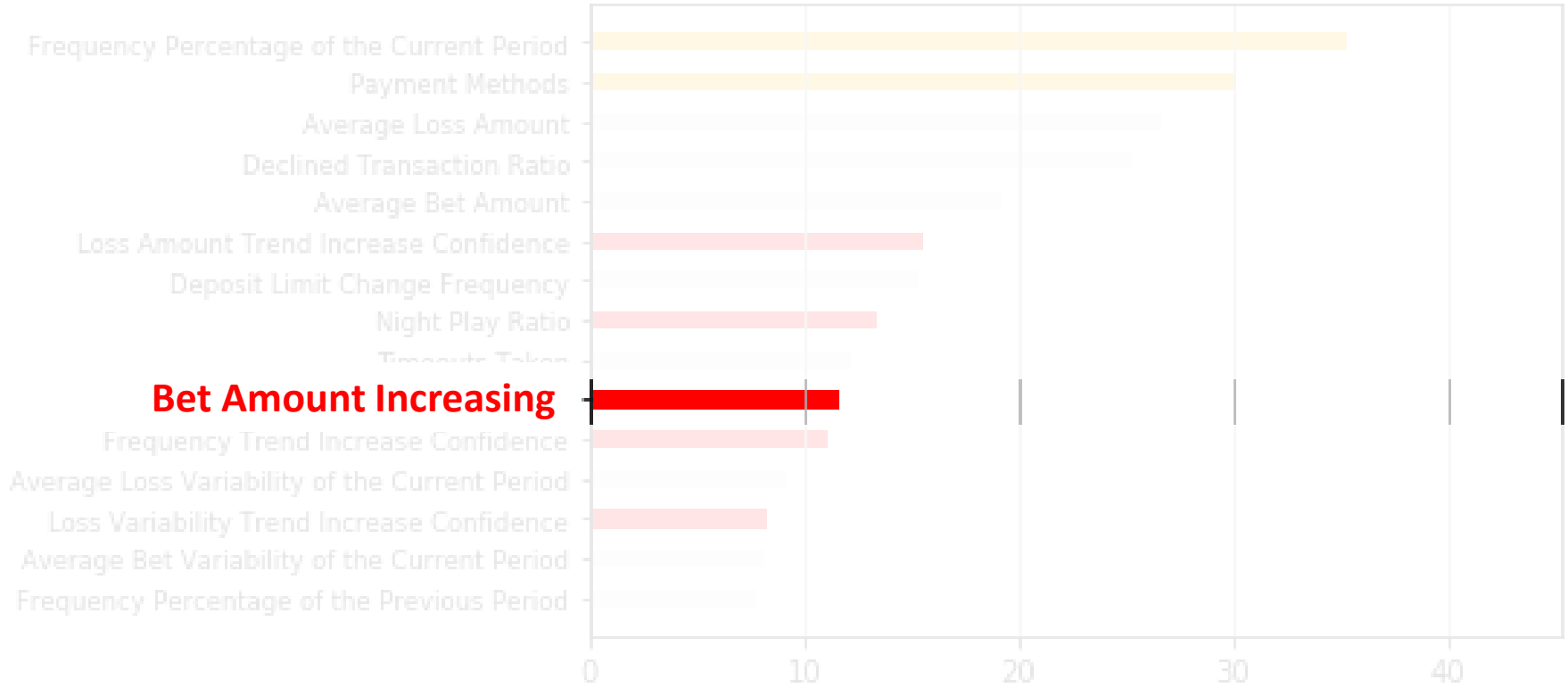
## New = Advanced indicators

- **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...**

**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**

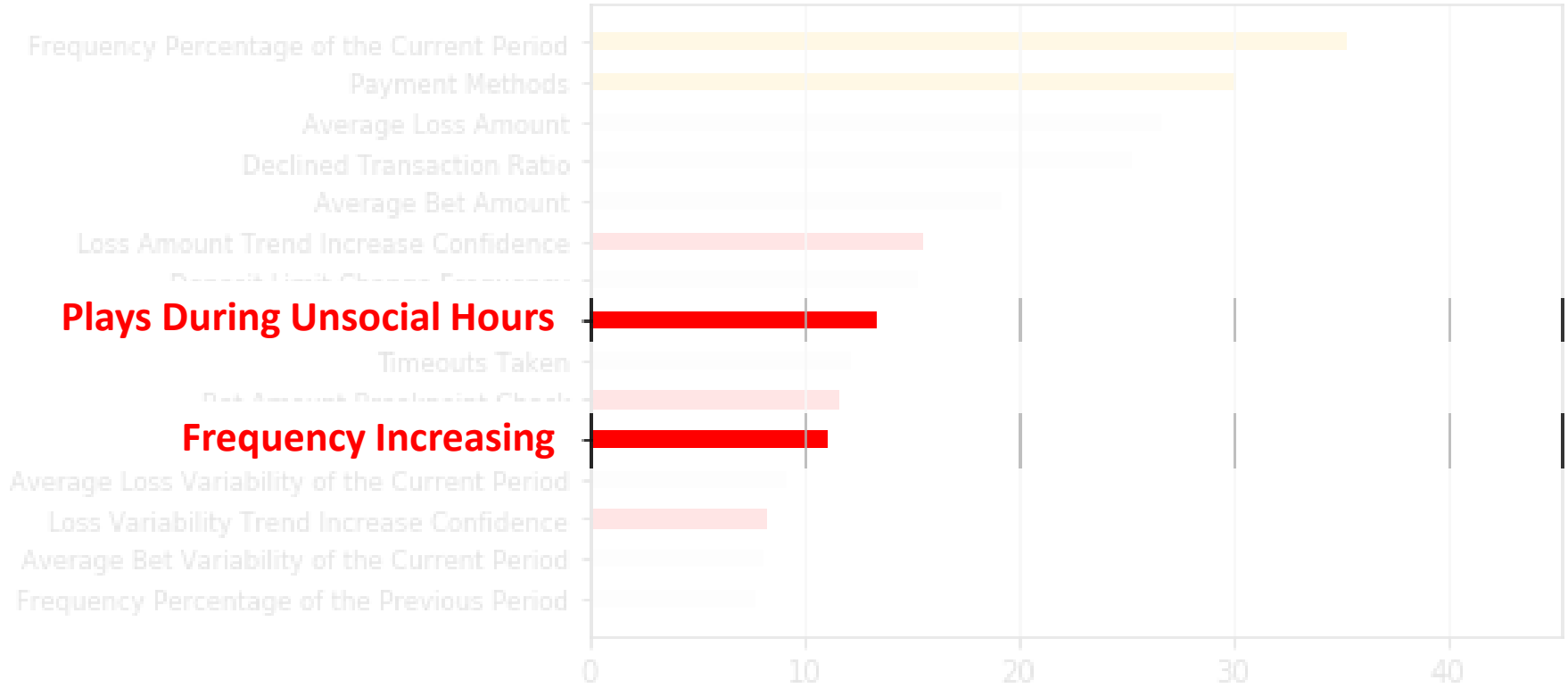
**Example of a High Risk Gambler**  
Most Important Variables (Top 15 of 51)





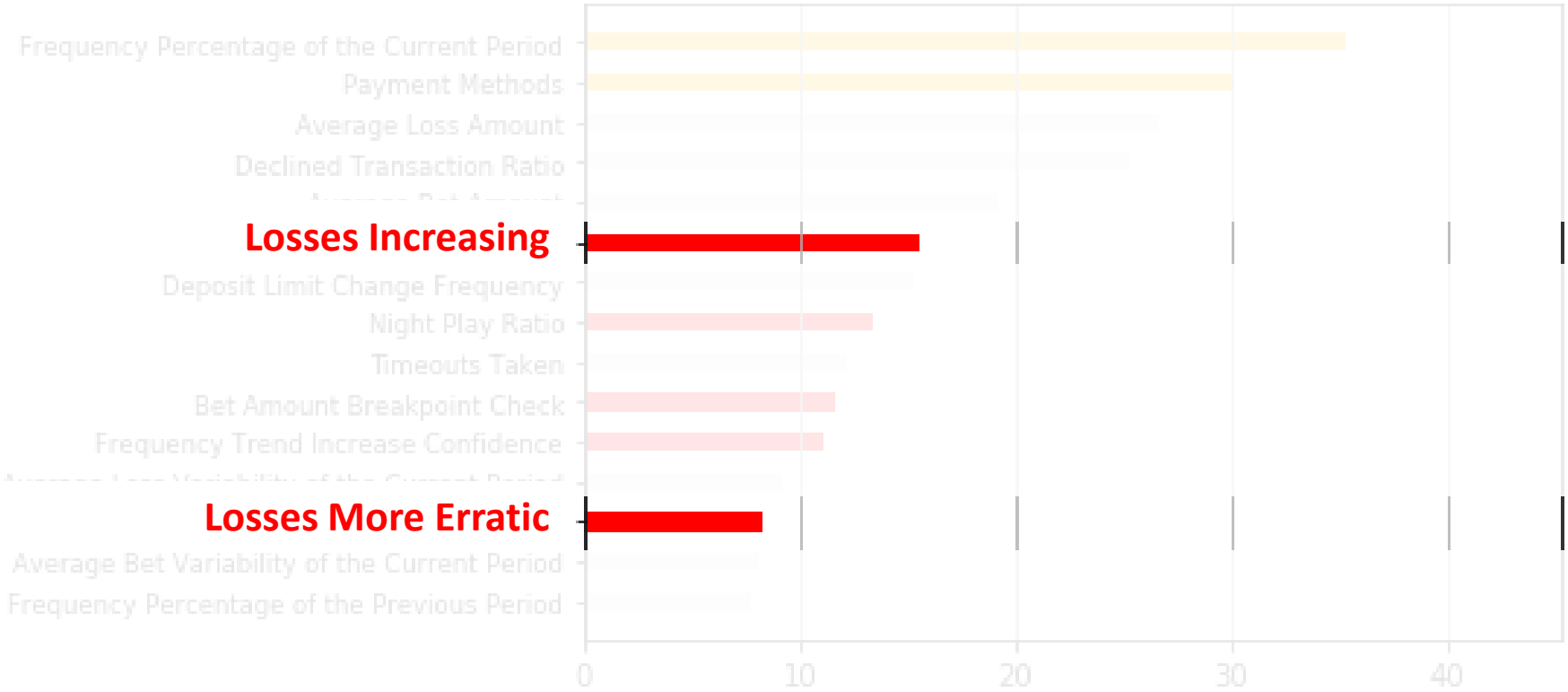
### Why is this player at risk?

- Increasing bet amounts



### Why is this player at risk?

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



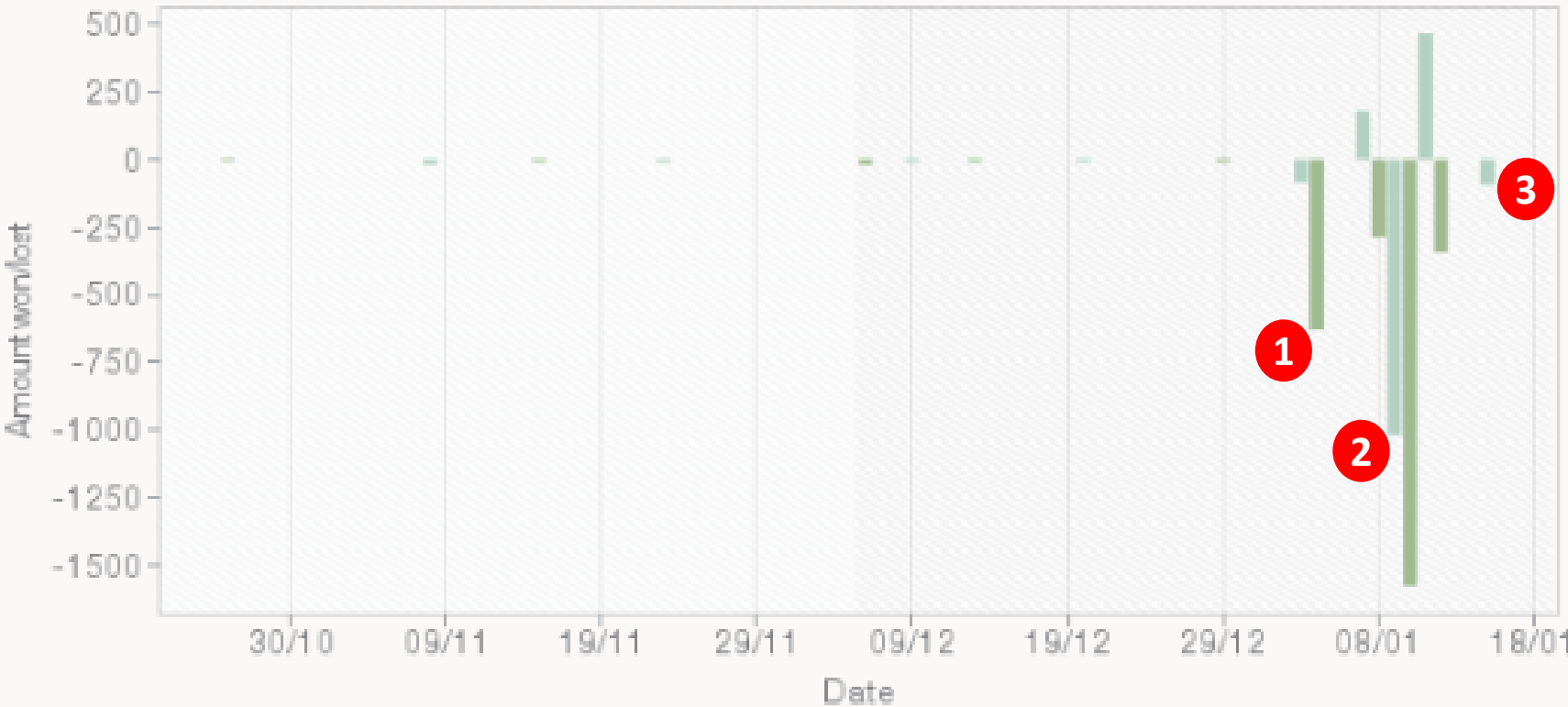
### Why is this player at risk?

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





### CURRENT STATISTIC SUMMARY: WIN/LOSS

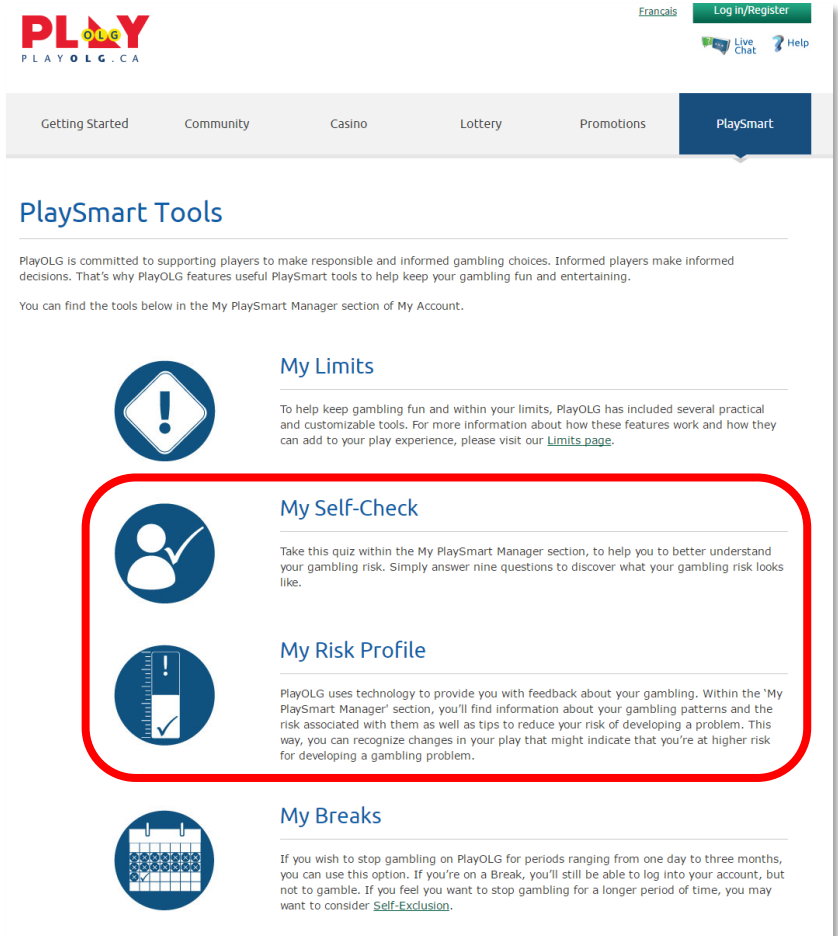


- 1** Educate about loss chasing and suggest using RG tools e.g., loss limits?
- 2** Cease marketing? Further educate on RG tools e.g., take a break?
- 3** Nothing?

## 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



PLAYOLG  
PLAYOLG.CA


Francis Log In/Register  
Live Chat Help

Getting Started Community Casino Lottery Promotions **PlaySmart**


### PlaySmart Tools

PlayOLG is committed to supporting players to make responsible and informed gambling choices. Informed players make informed decisions. That's why PlayOLG features useful PlaySmart tools to help keep your gambling fun and entertaining.


You can find the tools below in the My PlaySmart Manager section of My Account.

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#### My Limits

To help keep gambling fun and within your limits, PlayOLG has included several practical and customizable tools. For more information about how these features work and how they can add to your play experience, please visit our [Limits page](#).
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#### My Self-Check

Take this quiz within the My PlaySmart Manager section, to help you to better understand your gambling risk. Simply answer nine questions to discover what your gambling risk looks like.
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#### My Risk Profile

PlayOLG uses technology to provide you with feedback about your gambling. Within the 'My PlaySmart Manager' section, you'll find information about your gambling patterns and the risk associated with them as well as tips to reduce your risk of developing a problem. This way, you can recognize changes in your play that might indicate that you're at higher risk for developing a gambling problem.
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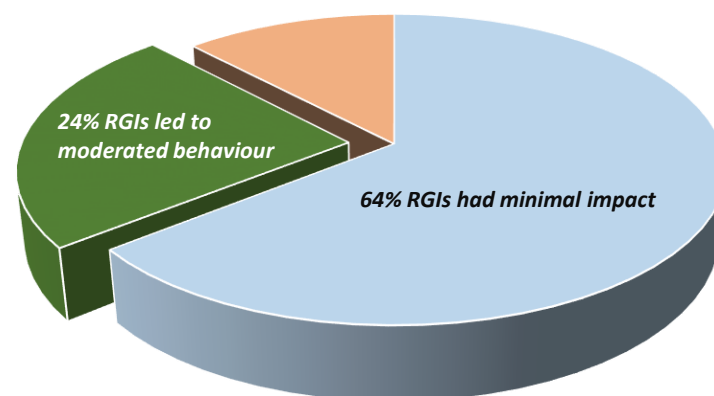
#### My Breaks

If you wish to stop gambling on PlayOLG for periods ranging from one day to three months, you can use this option. If you're on a Break, you'll still be able to log into your account, but not to gamble. If you feel you want to stop gambling for a longer period of time, you may want to consider [Self-Exclusion](#).

## 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

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### Assessment

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

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### Workflow

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



## Audience Discussion

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