Gambling digital tools across the player spectrum:

Promising practices & future opportunities

RG PLUS

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Executive summary

Context and rationale

In our technology-focused culture – and particularly in the context of COVID-19-precipitated social restrictions – the ability and appetite to **obtain information and support digitally** have both skyrocketed. This shift has been supported by the opportunities afforded by technology – to increase reach, speed up delivery, and collect and use extensive amounts of data. In the gambling field, the number and breadth of available tools for the provision of support and information have increased greatly in the last few years. Questions exist, though, around the appropriateness and effectiveness of as well as the opportunities for gambling-focused digital tools.

Purpose and approach

Our previous work on collaboration for supporting the digital wellbeing of young people and the links between online gambling and digital wellbeing outlined several important gaps around digital supports, including the need to prioritize positive design features in platform creation, for innovative approaches for support provision, and for broad and tailored tools across online spaces. To start to address these areas of need around digital tools, this piece of work focuses on answering the following question: **How can technology be used to deliver information and support to those across the player continuum of gambling involvement and harm?**

For the purposes of this report, **digital tools** refers to technology features, online tools, and apps for primary prevention among those at no to low risk of harm (e.g. tracking, budgeting) and for secondary prevention and tertiary support among those at moderate to high levels of risk (e.g. self-assessment, treatment).
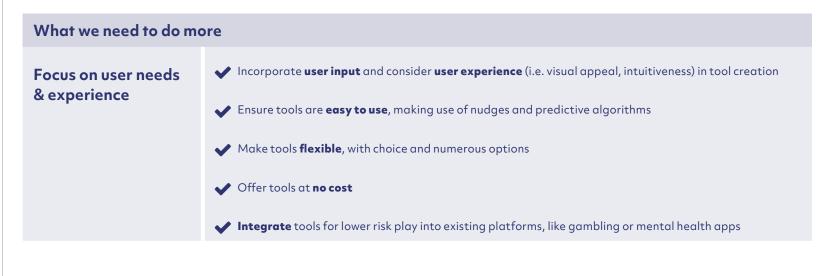
01

The current project focuses on the need and opportunity to use technological innovation to provide greater information and support to people around gambling. More specifically, it uses research literature, environmental scans of gambling and mental health digital tools, rapid assessments of tool user data, and consultations with international stakeholders to describe the ecosystem of gambling digital tools, outline promising practices, discuss barriers and areas of improvement, and propose ways to target areas of need in the field.

Our hope is that the contents and recommendations of this report will inform future collaborations, policies, and approaches and in particular the development, dissemination, and evaluation of effective digital tools for people across the spectrum of gambling involvement and harm.

Key insights

The key insights from this piece of work center around **what we need to do more** and **what we need to change**.

What we need to do more	
Focus on user needs & experience	✔ Incorporate **user input** and consider **user experience** (i.e. visual appeal, intuitiveness) in tool creation
	✔ Ensure tools are **easy to use**, making use of nudges and predictive algorithms
	✔ Make tools **flexible**, with choice and numerous options
	✔ Offer tools at **no cost**
	✔ **Integrate** tools for lower risk play into existing platforms, like gambling or mental health apps

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What we need to do more

**Use evidence-
informed approaches**

✔ Increase understanding with treatment tools using evidence-informed **clinical approaches**, like Cognitive Behavioural Therapy or mindfulness, for both guided and self-guided tools

✔ Increase understanding for lower risk players using **evidence-informed approaches** like psychoeducation (i.e. account information)

Offer broad supports

✔ Develop additional digital tools for those who are at **lower levels of risk**

✔ Use **people** to complement digital tools, like treatment professionals and customer service

✔ **Layer** tools for higher risk players with other relevant gambling and/or mental health tools

**Ensure tools are
visible & relevant**

✔ Make tools **easy to find**, like being accessible by one click and/or featured prominently

✔ **Frame** tools as relevant to target groups, using approachable language

Collaborate

✔ **Partner** for tool development, funding, delivery, promotion, and evaluation

What We Need to Change

**Create more
diverse tools**

❙ Develop tools/content for **affected others**

❙ Include **diverse perspectives** in tool development (i.e. various disciplines, cultures, and experts)

❙ **Tailor** tools to demographics, gambling and banking behaviours, and risk level

❙ Develop/make tools available **internationally**

01

What We Need to Change

**Maximize available
technology**

- Increase the use of **reminders, gamification, and incentives**

- Use **direct messaging** to support continued engagement

- Offer **banking tools** with more customization/features

**Offer comprehensive
& consistent tools**

- Identify a **standard set of tools** that is consistent across platforms, to support awareness, understanding, and comfort

- Develop a **full player view**, to support holistic and accurate tool support

**Build a tool-positive
culture in industry
& the public**

- Interact with players and communicate about tools **early in the player experience**

- **Actively promote and educate** people about digital tools on and off platform, at appropriate times, to support with normalization

- Create a **culture of responsibility** where player wellbeing is an industry priority, supported by regulation and employee training

**Build a supportive
framework**

- Include **regulations** that incentivize, provide funding for, and outline data requirements of safer gambling approaches

- Explore ways to support appropriate **data sharing** in the name of improved consumer protection

Evaluate

- Focus **independent evaluation** on identifying the most effective tools, what approaches work for who, and impacts on attitudes and behaviours (beyond awareness)

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Implications & next steps

The following **three critical next steps** should be the focus of future initiatives to allow for the deepest and broadest impact for people and on the gambling digital tools ecosystem as a whole:

1. To address the imbalance in the digital tools ecosystem and provide resources for the large(r) percentage of people who are not at high risk of gambling-related harms, more **upstream, prevention-focused tools** need to be developed to help those at no, low, or moderate risk stay at those levels or even reduce their risk.

2. To overcome several identified barriers and support increased digital tool awareness, uptake, and engagement, an evidence-based **suite of standard tools** needs to be identified by an independent party and implemented widely across the gambling industry.

3. As a key foundation to a standard set of tools that prominently features prevention tools, and to provide the most effective safety net for people, a widespread **culture of responsibility** over player wellbeing should be fostered across the gambling industry that is embodied in both staff and player initiatives.

Findings from this report should be taken forward by **future research and digital tool initiatives** to confirm the usefulness of promising practices and recommended approaches for addressing areas for improvement.

Foreword

02

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Foreword

In our technology-focused culture – and particularly in the context of COVID-19-precipitated social restrictions – the ability and appetite to obtain information and support digitally have both skyrocketed. This shift has been supported by the opportunities afforded by technology – to increase reach, speed up delivery, and collect and use extensive amounts of data. In the gambling field, the number and breadth of available tools for the provision of support and information have increased greatly in the last few years. Questions exist, though, around the appropriateness and effectiveness of as well as the opportunities for gambling-focused digital tools.

Our previous work on collaboration for supporting the digital wellbeing of young people and the links between online gambling and digital wellbeing outlined several important gaps around digital supports, including the need to prioritize positive design features in platform creation, for innovative approaches for support provision, and for broad and tailored tools across online spaces – like those targeted at young adults, level of involvement, and supporting positive beliefs and behaviours. To start to address these areas of need around digital tools, this piece of work focuses on answering the following question: **How can technology be used to deliver information and support to those across the player continuum of gambling involvement and harm?**

For the purposes of this report, **digital tools** refers to technology features, online tools, and apps for primary prevention among those at no to low risk of harm (e.g. tracking, budgeting) and for secondary prevention and tertiary support among those at moderate to high levels of risk (e.g. self-assessment, treatment).

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Our hope is that the contents and recommendations of this report will inform future collaborations, policies, and approaches and in particular the development, dissemination, and evaluation of effective digital tools for people across the spectrum of gambling involvement and harm.

Finally, we would like to thank all participants for sharing their insights and experiences, and Playtech plc for their support.

Dr. Sasha Stark
Senior Researcher, RG Plus

The **Responsible Gambling Council** (RGC) is a non-profit organization dedicated to promoting safer gambling by influencing positive change and advancing responsible gambling standards in Canada and around the world. For over 35 years, RGC has worked with regulators, operators, and the gambling public to ensure that gambling safeguards are in place to support the wellbeing of people and communities. RG Plus, a division of RGC, offers strategic consultation services across all lines of business from online betting and gambling to land-based operations. **RG Plus** guides operators and regulators towards a sustainable business model by evaluating the impact of programs; benchmarking responsible gambling initiatives; contributing evidence to strategy development; offering cutting edge responsible gambling turnkey training solutions; and undertaking independent research and public health consultations.

The gambling digital tools ecosystem

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The gambling digital tools ecosystem

In a world where we have now become accustomed to conducting most of our lives online, the 'why' of digital tools or their benefits compared to in-person, land-based, or analog tools may seem obvious. The stakeholders we spoke with noted several key benefits that help set the stage for our focus on digital tools for gambling in this report.

❝

Digital services are the way of the world. How people are wanting to engage with services is changing with generations – under 35s, the youth they want everything quickly and then want to move on. Fast delivery, that's what they're used to. The benefit to digital is it's hopefully hitting our target audiences.

Some key benefits are included in the box below.

Digital Tool Benefits

Making services more **broadly** accessible (i.e. geographically),

Faster access to services (i.e. in the moment),

Providing **omni-channel** support (i.e. WhatsApp, Messenger, SMS, phone, website),

Building **rapport** between user and service provider,

Serving as a **gateway** to getting people into the recovery system,

Anonymity, and

Helping people avoid or reduce **stigma and shame** when seeking support (i.e. easier to work into day, not face to face, can read about others' experiences, connect with others).

Many of the benefits of digital tools for gambling center on improved **customer service** and **agility**. Throughout the sections below, we'll explore how to maximize these benefits in the development and delivery of gambling digital tools.

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Gambling digital tools are emerging & focused on high risk

Before we get into the benefits, successes, and areas of improvement for gambling digital tools, let's first get an idea of what the system looks like currently.

The ecosystem of available digital tools for gambling is in constant flux, with new tools being released almost monthly. Tool creation has increased significantly in the past five or so years, with the majority being developed since 2018. In our environmental assessment, we located and reviewed **69 tools targeted for those who gamble**. Nearly half (48%) are mobile applications, with over a third (35%) available online and as an app. Almost two in five (39%) of the digital tools were developed in the **UK**, with nearly a third (31%) developed in **Australia**. Most digital tools for gambling (and associated research) focuses on **high risk players** – over half of tools focus on moderate to high risk (54%) and almost a quarter on high risk only (22%). This is in contrast to the mental health apps reviewed, which target mental health more broadly, both in terms of conditions and levels of severity.

Number of tools

| 69

Age

| Majority developed since 2018

Country

| Majority developed in the UK and Australia

Level of risk

| Majority focused on high risk

| Few prevention tools

App type

| Most are treatment apps and bank card blocks

| Limited tools for affected others

Incentives & gamification

| Limited use

Partnerships

| Moderate level; with regulators, industry, banks, treatment, leagues, and academics

| Linking between tools and services

Independent evaluation

| Several tools not evaluated

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A quarter (25%) of digital tools for gamblers are **treatment tools**, most of which are based on Cognitive Behavioural Therapy (CBT) and/or mindfulness, and often feature tracking (time, spend, urges), diaries (moods, emotions, personal situations), and crisis support. Roughly two in five (38%) are **bank card blocks**, nearly all of which are available in the UK and Australia. Notable tools for lower risk players include **educational games** and time and money **tracking**. Few tools provide support for affected others who've been impacted by someone else's gambling.

Few tools use **reminders, badges, rewards, or incentives** to encourage use. These practices are more prevalent in mental health apps, where reminders are used for tracking features and incentives include motivational quotes, customizable features, updated games, and achievements (i.e. digital sobriety chips). **Gamification** – the application of typical elements of game playing (i.e., point scoring, competition, cooperative goal achievement) to other areas of activity to encourage engagement – is only incorporated into a few digital tools for gambling, namely online video games focused on prevention. Almost three quarters (72%) of digital tools are available for **free**.

Several tools **partner with organizations**, like regulators, industry, banks, treatment providers, sports leagues, and academics for tool development, funding, delivery, promotion, and evaluation. Almost half of the apps (46%) include peer support and/or clinical services. Some digital tools that offer adjacent services link to each other, like treatment tools linking to gambling and bank card blocks.

Over four in five digital tools for gambling (83%) have not been **evaluated** independently or do not have any noted theoretical effectiveness. This is of particular concern as this means many tools are not based in evidence or clinical approaches, but instead in things like personal experience.

In summary, the ecosystem of digital tools for gambling is emerging and focused on supporting those with high risk play. There are opportunities for digital tools focused on lower risk play and affected others, that are developed/available outside of the UK and Australia, that make use of incentives and gamification, employ collaboration, are free to use, and are evidence-based and independently evaluated.

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The gambling digital tools ecosystem

Low Risk | Primary Prevention		Moderate Risk | Secondary Prevention	High Risk | Tertiary Support
House of Wisdoms	American Express ANZ	Lloyds TSB Bank	12 Steps Gamblers Anonymous
Reaction Lab	Bank of Melbourne	Macquarie Bank	RecoverMe
	Bank of Queensland	MBNA Bank	Betfilter
	Bank of Scotland	Monitor Your Gambling & Urges	AnonyMind
	Barclays Bank	Monzo Bank	Christians Quit Gambling Addiction
	Barred Gambling	National Australia Bank	Gambling Addiction Calendar
	Bendigo Bank	NatWest Bank	Gambling Addiction Therapy
	BetProtect	NZ Bank	GameChange
	Citi Bank Commonwealth Bank	playRIGHT	Gambling Help
	Credit Union of Australia	QuitGamble.com	Inventory of Gambling Situations
	Gamalyze Gamban	Royal Bank of Scotland	Kindbridge
	Gambless: Addiction	Santander Bank	Safer Online Gambling Group
	GamblingLess	Starling Bank	SPRing
	GamTalk	St. George Bank	The Cassava App
	Halifax Bank	Suncorp Bank	
	HSBC Bank	Virgin Money	
		Westpac	
Bet Blocker	Cost 2 Play	Gambling Addiction	GamSTOP
BetQuit	Gamble Responsibly America	Gambling/Bet Blocker	GamTest
Bettor Time	Gamble Wise	Gamblock	Stop the Chase
BF Browser			

Low to High Risk

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Lessons can be learned from promising digital tools

Several promising digital tools were identified in speaking with stakeholders and examining tool user data. These tools are demonstrating positive impacts and addressing some of the gaps in the digital tools ecosystem.

> **We get them to an initial entry to treatment – it gets them free access to downloadable blocking software. It's a layered approach. For some people GamStop is all they need, as everyone has a different need for the service. For others they need more layers of protection. I look at it like a sieve – it's blocking yourself and all operators have visibility of that, but then there's using the blocking software you block your device, and one step further we encourage to block their financial transactions through their bank, for the far end of people who want to stop for a period of time or forever.**

TalkBanStop

TalkBanStop is an example of a successful **collaboration** between three digital tools in the UK. TalkBanStop is a campaign that links the national helpline offered by GamCare, the national self-exclusion program GamStop, and the gambling blocking software GamBan – which is made available at no cost as part of the partnership. These digital tools are **layered**, in that if a person interacts with one, they can be referred to the other two tools if appropriate, thereby putting several supports in place to limit gambling. The reasoning being that 'there's a triangle effect, and if people take on board all three they're more likely to succeed in reducing or stopping their gambling'. The campaign has succeeded in generating awareness as well as increased uptake of the tools.

This campaign has been effective due in part to:

- Collaboration between the *chief executives* of each organization,
- Prioritization by all three organizations of the *needs of their beneficiaries* – those at risk of developing harm from online gambling, and
- *Intelligibility* for potential users of the links between the tools and overall goal of reducing harm.

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Success of the collaboration is also supported by the effectiveness of the individual digital tools involved in TalkBanStop. For example, **GamBan** is a practical digital tool in the moment someone is looking to implement supports for limiting their gambling. GamBan has been independently rated by GambleAware as the most effective blocking software and has had widespread uptake among the gambling sector.

For its part, **GamStop** is a centralized program where people can self-exclude from all licensed online operators in the UK. GamStop was created through legislation, a working group of operators and the trade association, and a steering group, and founded on transparency and standardization. Messaging for GamStop – including language and logo – are **consistent** across operators, which supports awareness among players. The result has been a significant amount up uptake and a high degree of satisfaction among users, as highlighted through **independent evaluation**.

Banking tools

Several stakeholders, in addition to the one quoted above, spoke about promising banking tools. Some noted that a key benefit of banking tools is their increased visibility of play across operators.

The most widespread banking tools for gambling are **bank card gambling blocks**, which restrict gambling transactions based on merchant codes – numbers assigned to businesses based on their type including whether they are gambling related. In many cases in the UK and Australia, blocks are standard voluntary features for customers, available for banking and/or credit accounts.

Several institutions offer additional services as well. Monzo, an online bank in the UK, also blocks open banking payments with their bank card block. The banking app for Commonwealth Bank in Australia provides customers with the option to also block cash transactions and to contact a member of their Community Wellbeing Team, who is a trained professional that provides confidential support for those who need help controlling their gambling spend (i.e. discussing available banking options, connecting to additional support services). National Australia Bank allows additional cardholders, people who hold a power of attorney, and people who have third-party access to another person's internet banking to apply for a gambling block. Finally, Lloyds Banking Group has partnered with GamBan to offer Lloyds, Bank of Scotland, and Halifax customers with three months free access to Gamban.

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Innovative work is also being done with open banking data. The UK company **GamTrack** has been developing a tool to track gambling spending across accounts and present it visually as a proportion of one's income. This information could be used to provide tailored messaging and potentially be linked with operator sites and accounts.

There are opportunities for banking institutions to offer more tailored and customizable digital tools for their customers, like gambling budgets on accounts or for daily cash withdrawals, and offering gambling blocks for credit cards (particularly in jurisdictions were gambling on credit is permitted).

Gambless

Gambless is a free user-led support app, currently available in English, Italian, and Russian. Users can access different features such as therapeutic course modules, podcasts, self-assessments, diaries to track progress, a chat box, and user support via SMS messages. Gambless utilizes various **evidence-based therapeutic techniques**, including CBT and Gestalt Therapy (a form of psychotherapy that emphasizes personal responsibility and awareness of significant sensations for protecting against potential triggers).

The app is not currently actively promoted to users, with focused instead placed on app store optimization so Gambless appears as the first or second app in searches for gambling treatment. The app's privacy policy meets the standards of the General Data Protection Regulation (GDPR) established by the European Union and the app has been certified by ORCHA, an organization that **independently evaluates** health apps.

The majority of Gambless app users are experiencing a high level of gambling risk (81%) and are from the **UK** (25%) and the **US** (27%). Over a third of users (37%) have completed at least one of the self-assessments, used to assess problem gambling level (33%), gambling IQ (8%; gambling knowledge and distortions), and risk factors and behaviours (5%). Overall, users score moderately high on gambling IQ and moderate on risky behaviours.

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RecoverMe

RecoverMe is a user-led mobile app that uses various **evidence-based therapeutic techniques** to help people manage their gambling. Users can access different features – some for free and others through the premium version (by redeeming a free code or for a fee) – such as six CBT modules, a mindfulness course, a diary to input daily gambling habits, goal setting and identification of personal **rewards** (i.e. go to a movie), and a buddy system (SMS messaging to a friend during gambling urges). RecoverMe is promoted through **partnerships** with charitable organizations and sports clubs. The app has stringent data protection policies and is GDPR compliant.

The largest demographic of RecoverMe users is young men between the ages of 18 and 29 years (45%). The majority of users gambled online (89%) and have gambling problems (93%), with almost half playing two or more games regularly (48%). Almost two in five (38%) found RecoverMe through an internet search.

The first CBT module (46%) and diary (38%) are the most used (free) features of the app. Among premium users, completion of subsequent CBT modules is higher for module 2 (46.3%) and decreases through to module 6 (14.7%). Users rate RecoverMe favourably, indicating that is it useful (100%), easy to use (57%), helpful (57%), aesthetically pleasing (43%), and engaging (43%).

RECOVERME

03

Sky Betting & Gaming Profit & Loss Tool

The UK operator Sky Betting and Gaming includes the **Profit and Loss tool** in their online platform, which provides a visualization of customer betting performance over time. This was one of the few tools for **lower risk players** that was highlighted. The tool has achieved uptake from players because it:

- *Resonates* with people,
- Players don't think it is a *safer gambling tool* (because of how it's been communicated to them), and
- It provides a *visual nudge* towards behaviour change.

The tool appears to be having a positive impact on behaviour, with many users spending less money, and has been normalized among players.

The ecosystem of digital tools for gambling has expanded considerably in the **last four years**, with a high concentration of support or **treatment** focused tools. Areas of need for digital tools include tools for lower risk play and affected others, developed/available outside of the UK and Australia, that use of incentives and gamification, that mobilize partnerships, are free, and that are evidence-based and independently evaluated. The case studies of select digital tools for gambling provide a first look of how tools can successfully address some of these gaps in the ecosystem, through collaboration with other tools, charities, and sports leagues; **international** availability; **rewards**; focusing on **lower risk** players; **layering** services; **consistent** messaging; **evidence-based** approaches, and independent **evaluation**.

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>
> **I think that it's a normal part of user experience in that product now and it has benefits. Obviously there's no bigger nudge than reality, and we know people's recall of these things is generally poor. […] I think a large proportion of users after interacting with it spend less money as a result.**

What is working

04

04

What is working

In the case studies of digital tools for gambling reviewed in the previous section, we began to see some promising practices of successful tools: use of collaboration and rewards, an international focus, consideration of lower risk players, layering and consistent promotion of tools, evidence-based approaches, and independent evaluation. To begin to develop a roadmap for moving the digital tools ecosystem forward, this section examines the promising practices or 'what is working' for gambling digital tools in more detail so that we can encourage more of the same.

"

Digital tools are successful at being available 24/7 for those who suffer from gambling related problems. I think gambling tools should be as simple as possible and not overly intrusive. I also think digital tools should be layered and collaborative in order to best manage gambling harm.

The promising practices that were identified relate to how the tool is **created**, how it **works**, how it is **framed**, where it is **placed**, what it **costs**, and how it **links** to other tools and services.

Promising practices for gambling digital tools

Tool creation & function

Tool delivery & dissemination

Include user input & focus on user experience	Increase user understanding	Easy to use & flexible	Framed as relevant using approachable language	Free & easy to find	Integrated & layered with other tools & services

04

Tool creation should focus on user input & experience

One consistent message from stakeholders about tool development was that, from their very inception, tools should be **focused on the user**. At the tool creation stage, there are two key ways to do so: by including user input and by focusing on user experience.

> **Making sure that the consumers of whatever is developed are involved and have an input and voice in the development of whatever the tool is. It needs to go back to the consumer because as an industry historically we've very much been thinking that we know and we develop that. We need to listen to all voices in the spectrum of gambling – there are many people who are happy and managing in their own way, to the extreme to where gambling is ruining their lives. We need to make sure we listen and what would have helped, but also the pace of change – we can't spend too long doing that, we need to do the work.**

User input should be sought and included to ensure that tools are relevant. Input should be obtained from the intended audience, while also ensuring tools are available for those across the spectrum of gambling involvement and harm. Information should be sought on what people want and how they want to be helped, including which existing tools they'd like to see more widely available. Input can be sought in an information gathering stage, or users can be included throughout the design process using a co-design approach.

It is also important to consider the **user experience** of the tool, as it can encourage uptake and repeated use when done well. Important elements to consider are outlined in the box below.

Important user experience elements

▌ Visual appeal (i.e. font, design, images),

▌ Easy to understand information,

▌ Intuitive, functions without much user input,

▌ Not overly intrusive (i.e. avoid repeated/poorly timed popups), and

▌ Support resources and language appropriate to audience/jurisdiction.

04

On the note of visual appeal, research finds that people at-risk of gambling harm have a stronger attraction to gambling-related pictures, which may be a useful approach for prompting engagement with tools among this group (Boffo et al., 2018). Caution should be exercised, though, to avoid images that may encourage further gambling or otherwise be triggering.

> **"**
>
> **If it's not visually appealing or easy to understand it will not have the uptake to make it successful. It needs to be easy to understand and work effectively with not much user input.**

Tools should be framed as relevant using approachable language

Even if promising practices are followed in the creation of digital tools – they are user focused, increase understanding, and are easy and flexible – their uptake will greatly depend on how they are made available to potential users. The first piece of this is **how the tools are framed**, for both players and the industry.

Broadly, digital tools need to be framed as being **relevant** to players – in a way that resonates with them. Tools should be portrayed through users' eyes, and not through the eyes of policy makers, regulators, operators, or (exclusively) those who experience severe gambling harms. Framing should focus on the usefulness or user benefits of the tool. Framing should make safer gambling seem like a 'sensible thing' to do, by linking it to supporting health, keeping things fun, and managing play.

Stakeholders of various types noted that caution must be used to not frame tools for those experiencing severe harms as valuable for the entire spectrum of players. Doing so is inappropriate, as most players are not experiencing severe harm, and will limit uptake among those who (rightly) don't believe they fall into this group. Instead, tools should be framed as appropriate for the 'average' player or particular groups along the spectrum of play.

04

> **Moving away from what we traditionally thought about what responsible gambling looked like as far as it targeting just individuals who were harmfully involved in the activity to really something for everyone. Suddenly regardless of how you're engaging in gambling there is useful helpful information that is available to you – taking a customer service approach across the board.**

One step in making digitals tools relevant for players is using appropriate and approachable language. Language should be player centric – compassionate and respectful. More specifically, language should:

- Be *positive*, not pejorative,
- Be *supportive*, not punitive,
- Be *accessible*, not legalese,
- Talk *across*, not down, and
- Be *up front*, not patronizing.

Framing of digital tools as relevant

- Identify **target audience** as all players or key groups
- Portray through **user's eyes**
- Focus on usefulness or **benefits**
- Show tool use as a **sensible** choice

Language should also highlight the benefits the tools provide or problem they solve for users. Examples of benefits of digital tools include enhancing the play experience, reducing risk and building resilience, and fostering skills and knowledge for preventing problems. Focusing on player centric language and tool benefits – as well as using consistent accepted terms (i.e. gambling harm, safer gambling) – can help the tool resonate with players, increase their willingness to use them, and reduce stigma associated with tool use.

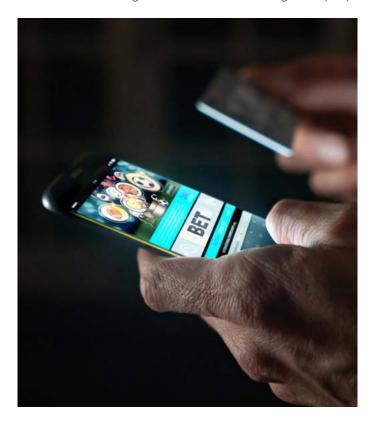| Avoid	Use Instead
Problem or responsible	Is everything okay?
Addiction	Manage your play
Precommitment	Keep things fun and entertaining
Curfew or time out	A way that works for you
Trespass or banned	Taking a break

04

An example of approachable language noted by several stakeholders is framing limit setting or precommitment tools more neutrally as account or budget management. In addition to making these tools more relevant to players, this sustainable play-focused framing – providing players with more information about their account or the ability to set budgets – can also support with building industry buy in with digital tools, if they are struggle to embrace the thought of customers limiting their play.

> I think sometimes it's just as simple as framing usage as enhancing their experience as opposed to staying in control. I think somebody made the point about the negative connotations that come with losing control and the denial that even problem gamblers and those at risk feel that they are in control. One thing that's universal to all players is that they want to finish the gambling session feeling good as opposed to bad. So if you can frame it that 'if you use X tool to enhance your experience' or something to that effect. I think that will go some small way to trying to minimize this stigma.

> In positioning this tool it's been referred to as being able to budget your time and money versus set limits for yourself, and so that's helpful in making it digestible for operators so that it's more of a lens of sustainable play and helping people to manage their play so that they are longer lasting customers. And then even for players, the idea of being in control of your budget and making your budget work for you is easy to digest as well for them.

04

Tools should increase understanding, be easy to use, & be flexible

Tools for those at both the lower and higher ends of the spectrum of gambling risk should focus on **increasing people's understanding**. Let's start with what this looks like for **treatment-focused tools**.

Treatment for those experiencing more severe harm from their play should mobilize behaviour change strategies that reflect the person's stage of readiness: pre-decisional, pre-actional, actional, multi-phased (Rodda et al., 2018). As we saw in the tool case studies, the most frequently used and successful therapeutic approach for gambling harm is Cognitive Behavioural Therapy (CBT), which is delivered through multiple sessions where gambling norms, risk factors, and harm prevention are addressed (Petry et al., 2016). Brief mindfulness-based interventions can also be a useful supplement to CBT (McIntosh Crino, & O'Neill, 2016).

Increasing understanding through gambling digital tools

Treatment tools	Prevention tools
Focus on stage of behaviour change readiness	Employ psychoeducation
Employ Cognitive Behavioural Therapy and/or mindfulness	Provide relevant information
Offer both guided and self-guided tools	Consider tailored feedback, like account information

Both guided and self-guided treatment interventions have been found to be effective. Guided interventions are especially attractive to new treatment seekers (Rodda & Lubman, 2014) and programs that use a virtual therapist to introduce participants to an online intervention show positive results (Fleming et al., 2021). For their part, self-guided online interventions – such as visual demonstrations to correct erroneous beliefs, self-exclusion, CBT workbooks, pre-commitment, cognitive and behavioural coping strategies, stress management strategies, and mindful meditation – have the potential to mitigate stigma-related concerns with treatment (Gainsbury & Blaszczynski, 2011; Matheson et al., 2019).

04

Now let's discuss what increasing understanding looks like for tools aimed at those at **lower risk of gambling harm**. A key concept in this area is psychoeducation, where approaches are used to provide people with an awareness and understanding of their gambling: why they gamble, how much they are spending. The types of information that can be useful to share to build this understanding are included in the box below.

Prevention information for increasing understanding

▎ Providing information on *how games work*,

▎ *Correcting erroneous beliefs* about gambling,

▎ Sharing *safer gambling tips* (i.e. limit setting, gambling for entertainment not for money, and balancing gambling with other recreational activities),

▎ Providing *personalized feedback* on game play, and

▎ Outlining the breadth of *gambling harms*, including evoking empathy for impacts on others (Hing et al., 2017; Johansene et al., 2019; Langham et al., 2016; Tong, Chen, & Wu, 2019; Wood & Griffiths, 2014).

A key way to provide personalized feedback on game play, as outlined in the list above, is through account information. Account information provides players with detailed information on their play, like how much they've deposited, wagered, and spent, and where they are in relation to their set limits.

> **I would say that psychoeducation is extremely important and bringing awareness. Some of my clients don't have a full understanding of how much they spend on gambling and once it was presented to them that they were spending like $500 a week on gambling you are able to push them and ask them what else this money could have been spent on. We tend to not self-monitor certain behaviours, like going out for coffee. So having that psychoeducation present is very helpful.**

Stakeholders likened this type of play history to step trackers and bank statements, which also quantify behaviours and are accessed regularly. Like these other tracking tools, gambling account information can be useful in increasing player awareness by 'drawing attention to the reality of what they're doing'. Because people are known to have poor recall of their gambling behaviours, increasing awareness of actual play behaviour can lead to a 'real golden nugget of reflection' about their play. As a key piece of informed decision making, the more information players are provided with about their own behaviours through account history, the better they are able to manage them.

04

Now that we have an idea what type of content that is useful for increasing understanding, let's discuss how it should be provided. One stakeholder described account information as providing play details 'in hand, digestible, almost in your face'. This echoes what many other stakeholders noted, which is that digital tools need to be easy to use. When we say **easy to use**, we mean tools should be:

- Simple to *access* (i.e. download, register),
- Easy to *understand* (i.e. content),
- Written in plain *language*, and
- *Intuitive*, in terms of how it works (i.e. straight forward cost to play calculator, app that shows the amount saved by not gambling or sticking to limits).

Providing tools that are easy to use and understand is at its foundation good customer service that can lead to higher uptake. If the tool is easy to use,

> **There's no bigger nudge than reality and we know people's recall of these things is generally poor. So having a visual nudge to change your behaviour when you are in a poor bank performance position has worked well.**

players will come back and use it again and perhaps recommend to others. It is important to note though, that once certain tools are in use – time limits, money limits, time outs, bank card blocks – some friction is necessary to keep them in place. The inability to adjust or remove these tools (immediately) gives the user pause and is critical to the tool's effectiveness.

Another way to make tools easier to use, or encourage optimal use, is through **nudging**. Nudging players to use the tools or use them in a certain way can support with uptake as well as (intended) engagement and impact. One stakeholder noted that nudging can strike a balance, where tools or features are "leading players to make their own choices". Examples of nudges for gambling digital tools are included in the box below.

Nudges for gambling digital tools

Prompting tool use on *sign up* (i.e. set a deposit limit),

Opting-in players to tools, which requires their conscious decision to opt out (i.e. upon account, e-wallet, or loyalty sign up),

Mindfully selecting the *anchor* for tool settings, as many will move forward with this default,

Providing a *shortened list* of options for high risk players (i.e. spend limits for young adults),

Using *pop-ups or banners* that link to the tool page or ask if they want to use a tool, and

Sending *reminders* of the benefits of tool use or to set/adjust tool settings (i.e. time or money limits).

04

> **A common method of incentivization is ease of use or interface. When you talk to digital providers, they talk about too many clicks, difficulty in singing up, ability to navigate the site. People talk about this as reducing the friction in customer experiences. If they are packaged and positioned as easy to use.**

Nudges can be informed by a player's own behaviours. **Predictive algorithms** that analyze the wealth of player data are effective at identifying markers of harm, which can be used to trigger and support interactions with players. This approach can make tool use easier for players (and increase engagement) by directing them to or presenting them with messages or tools that are most suited to their current needs, like 'to remind them of the risks and the tools we provide to the high end, to confirm they understand what they are doing and are comfortable with their play and offer resources if not'.

The second key consideration of how tools are delivered to increase understanding is to ensure they are **flexible**: choosing specific times to limit play (i.e. a few hours to several years), setting spend limits for different time periods (i.e. daily, weekly, monthly),

choice of when to set limits (i.e. on registration or at a later time). Flexibility provides people with more control over how they use the tools and allows them to adapt them to their needs and lifestyles, thereby increasing their (continued) use of them.

The question of flexibility or choice is a key piece of the debate between **mandatory or voluntary** tools. While mandatory tools support 100% uptake and increased impact on behaviour, they often lead players to use them in ways that negate the goals of the tools – like setting excessively high limits – either because they don't think about their thresholds or don't want to be limited. Players may also decide to play where there are no such mandatory tools. Voluntary tools, on the other hand, are often preferred because they are more flexible and are used by informed players who want to use them.
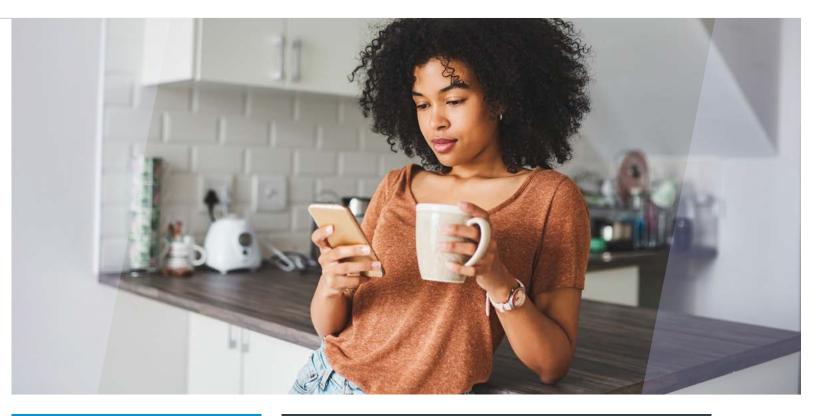
> **I can say from a recent analysis of a campaign that had a pop-up setting your limits tool and you could just click on it to access the sign-up page – I can say because of this campaign it facilitated uptake, just something as simple as that. I think looking for those little nudging ways to encourage use is helpful and we have that on operator websites such as banners.**

04

Gambling websites use various features and algorithms to encourage user engagement and retention. How can we use these same features and adapt them to the responsible gambling tools to make them more or on par with how engaging the games are?

That's a big challenge for responsible gambling related tools right now is what problem are they actually solving from a consumer standpoint, as opposed to trying to assert some sort of operator or researcher behind the operator. What problems do the consumers have? The best example of that so far is having consumer driven control of when and where they can access their account. A lot of young people don't want to be able to access their account from 11pm on Friday to 8am the next day – creating a solution for the consumer.

04

Tools should be easy to find

In addition to digital tools being easy to use, as discussed above, they should be **easy to find**. This can look like being **accessible by one click** or some other form of direct access and users being **actively made aware** of available tools. Active approaches to encourage awareness can include:

- Featuring available tools *prominently* on site (online and land-based; detailed recommendations provided in the GamCare Industry Code for the Display of Safer Gambling Information (Gambling Websites and Apps)),
- Outlining tools at *appropriate times*, like when playing, on account and/or loyalty sign up, and in staff interactions, and
- Promoting tools in *other places* where potential users can be found (i.e. social media, search engine results for payday loans).

> **There's two things aren't there. There's the tool itself and then when we're talking about online is the positioning of the tool. There are some pretty good tools. […] The difficulty with this is where does that appear on the site, when does it appear.**

> **All of these tools should be free to the consumer. The core hub of safer gambling tools are for a reason. They choose to use them because they need them. They are taking an approach and 'this is my remit for what fun looks like'.**

Tools should be free to use

Over a quarter of (third party) gambling digital tools that were reviewed in the environmental assessment placed content or features behind paywalls, with monthly subscriptions required for access. There was a general consensus among stakeholders that tools should be available at reduced cost but preferably **free of charge** to make them as accessible as possible to those who need them.

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Tools should be integrated & layered with other tools & services

Generally, stakeholders felt that digital tools for gambling should not be standalone apps or websites. For those at lower levels of risk, digital tools should be **integrated** into where people are already spending their time – like online gambling sites or (casino) apps or existing non-gambling apps (i.e. mindfulness). Because people are less likely to specifically seek out safer gambling digital tools, making them available in places that are multi-use, that they already use, and that they are familiar with can increase uptake and support sustained use.

> **I think that there's more specific research on this – the number of times someone will use an app after downloading it. People only want so many on their phones. Will people shop for a responsible gambling app? If it's something that's integrated into the online gambling site or app they already use – they know how it use it and this is just another tool that's within that.**

Stakeholders noted that a **layered** and collaborative approach was the most impactful for supporting those experiencing gambling harm. This includes both within and outside of the gambling field. Focused specifically on gambling, TalkBanStop – as discussed in detail in Section 3 – was outlined as a successful example of this **layering of gambling digital tools**. Because the included tools offer complementary services – blocking and emotional support – and all three are linked through messaging and one-click access from each other, users are provided with a layered safety net of support that increases the odds of succeeding at reducing or stopping gambling.

> **The people who are struggling with online gambling will benefit from a multi-layer approach to minimizing their access to gambling with the blocking tools and softwares, buttressed by emotional support from helping services and other treatment. That combination of practical and emotional support coming together, that two pronged approach in one brand has been very intelligible for people – people understanding what is trying to be achieved.**

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In addition to layering digital gambling tools on each other, it is beneficial for tools to link users with actual **people** – customer support, treatment professionals, and peers – to complement, support, and execute tool content as well as provide motivation. Customer service staff can be the most well suited to react to markers of harm identified by predictive algorithms, interacting with those exhibiting high risk play. Treatment professionals can back up the tool content, provide mentoring, support with triggering content, and use data captured in the tool and shared with them by the user (i.e. journals, tracking). Peer support can also be useful to help increase awareness and understanding (using approaches like case studies) and personalized chat functions can humanize the support.

Extending beyond gambling, digital tools that address **comorbidities** alongside gambling or various pathways to gambling harm, such as anxiety and depression, have been found to be impactful. For example, brief interventions for gambling that are delivered alongside those for problem drinking or vice versa can help reduce gambling and/or alcohol use (Cunningham et al., 2020; Stea, Hodgins, & Fung, 2015).

> **Before we developed our gambling app we were working in mental health and we decided to duplicate our app to help those with gambling harms. Problem gamblers often have comorbidities, so our tool does focus on making sure users also have treatment options for feelings of anxiety.**

> **There are definitely opportunities with technology. We know that there is so much benefit also in having that one on one connection with certain people and certain players at different levels, and so I just [think we should be cautious not to be] leveraging so much technology – we don't want to negate the value of some of our traditional forms of engaging with people.**

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Digital tools for gambling are succeeding in several ways.
Promising practices for tool development and delivery include:

Tool creation should be ***user-centered***, by seeking user input and fostering a positive user experience,

Tools should ***increase user understanding*** through guided and self-guided evidence-based clinical approaches for those seeking treatment and psychoeducation and (account) information for those at lower risk,

Tools should be ***easy to find and use***, making use of nudges and predictive algorithms,

Tools should be ***free of charge and flexible***,

Tools should be framed as ***relevant***, particularly tools for those at lower risk, using ***language*** that is respectful and accessible, and

Tools for lower risk players should be ***integrated*** into other apps or sites and those for higher risk players should be ***layered*** with other tools for gambling and buttressed by professional and peer support as well as resources for comorbidities.

What isn't working

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What isn't working

Though there are several promising practices to follow for creating effective digital gambling tools, there are also numerous things that aren't working – in other words barriers or areas for improvement. We saw in Section 3 how there are opportunities for digital tools in the gambling ecosystem to focus on lower risk play and affected others, be developed/available outside of the UK and Australia, make use of incentives and gamification, employ collaboration, be free of charge, and be evidence-based and independently evaluated. In this section, we take a closer look at the needs for gambling-focused digital tools to identify areas that warrant extra attention and effort, across the digital tools process from creation to delivery, uptake, engagement, and impact.

Barriers for gambling digital tools

Tool creation   Tool uptake   Tool engagement & impact

| Limited incentive, priority, & funding for tools | Keeping up with the quick pace of technological change | Data privacy & quality concerns | Limited knowledge of, openenss to, & awareness of most appropriate tools | Operational realities that limit industry support | Behaviour change is difficult to achieve | Digital tool contradictions & drawbacks | Struggles to conduct independent evalautions |

Tool development is limited by lack of incentive, priority, & funding

Digital tools face several important barriers at the very outset that impede tool development. At the government level, some stakeholders noted that the state of **regulatory requirements** can serve as a barrier if they do not provide sufficient levels of player protection. The effectiveness of digital tools is lowered when the gambling offerings are more risky in nature, like when game and operational features that can put people at risk (like bonus bets or complicated terms and conditions) or when appropriate complaints procedures are not regulated. Further, stakeholders noted that when

regulations do not put a strong and explicit emphasis on safer gambling practices, the incentive for operators to develop or support the development of digital tools is can be largely absent, meaning it can fall on entrepreneurs or charities to attempt to bear the heavy financial and other costs of developing tools, with limited room for innovation.

In part because of existing regulations, many operators do not place **priority** on making digital tools available. Stakeholders noted that the focus is often instead on getting (online) platforms up and running and increasing market share and profit, leaving safer gambling broadly and digital tools specifically as a low priority. In this context, it can be a struggle to get attention and resources shifted to the development of digital tools.

> **The biggest challenge with responsible gambling or problem gambling as an industry is that there is no shadow price – there's no price for bad responsible gambling within an organization. There's no cost associated with it. There's no market forces that get exerted on solving that problem. You get a bunch of people iterating around some random BS that looks very close around the norms and regulations around these problems.**

> **The state of the industry and the builds and the priorities of the business to just get into the emerging markets and be present there, that makes it hard to make this a priority. It's important to say that it's not resistance – there's a difference between resistance and the fundamental priorities of the business. It's really just getting attention and trying to integrate things at the design level.**

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When safer gambling (tools) are not incentivized or prioritized, it can be a struggle for charities or independent groups to obtain **funding** for the initial and continual development of digital tools. Creating, maintaining, and updating digital tools is costly. Things like tailoring or subdividing tools for different audiences, scaling up delivery, or monitoring for and addressing work arounds for blocking softwares are also expensive. While some jurisdictions include certain pockets of government funding for things like gambling treatment, others do not. Insurance coverage for treatment can also be inconsistent. Further, many tools are developed by charities that have limited funds for app upkeep. Consistent and sufficient funding is required to

meet user expectations, support engagement, and ensure the viability of the tool. Funding can also support in providing the long term organizational or collaborative support that is required for sustaining tool upkeep and availability.

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>
> **The level of standards users expect from an app is often hard to meet as many apps are new or developed by charities that don't have the disposable income to continually keep the app up to date to include more desirable features.**

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Tool creation is limited by concerns around data privacy & quality

The nature of technology also poses several complications for tool development. The **pace of technological change** can threaten app longevity. As we just saw, maintenance, like addressing bugs or conducting upgrades, can be continuous and different across platforms. Upkeep is critical, though, to keep up the user experience required for engagement. A tool that is novel while being developed can also become obsolete before it is launched, which can be particularly damaging with limited funding.

> **We developed a tool that looked at your behaviours of your use of digital, but when the new iPhone came out those tools were already built into the phones.**

Although digital tools are able to harness the benefits of the data afforded by technology, there are some limitations in this area. Concerns around and laws designed to support **privacy** can pose barriers for digital tools in several ways. While data protection should remain a key priority and strong privacy assurances can support tool use, tool development and single customer views (as discussed in Section 6) can be limited by things like:

- *Data protection laws* that limit the sharing of data (i.e. credit or payment information),
- *Inability to share information* between online and land-based operators,
- *People's concerns* about what digital tools will do with their data (i.e. share it, targeted messaging, encourage them to play), and
- Questions around *data management* (i.e. where data will be held, who owns the intellectual property).

> **Unless they understand the tool, people are worried about their data being available. That's the issue with precommitment with everyday customers – they are worried about providing their private information because they are worried what the government will do with it.**

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Limited information or a lack of transparency on how data is collected and used can make people hesitant to try or deeply engage with tools. Many of the gambling tools from the environmental assessment do not clearly state how personal information is being protected. This is especially concerning for features like chatrooms and forums, where users are able to communicate freely with one another and can bring up issues of confidentiality and triggers.

In cases where data can be shared, there are often issues with the way **data is collected or made available**: it is not necessarily in the format required by a particular tool or stakeholder. For example, one American tool requires all digits of a personally identifiable number while certain states are only allowed to share a certain number of digits, which limits the tool's effectiveness. A lack

> **In many respects we don't know which format is the standardized format, which kind of data is mandatory for researchers or operators to get – which is essential, in which format. They are storing that data in different formats. This has created a big barrier for people to collaborate, both for researchers and third party organizations to provide help.**

> **I think that artificial intelligence can be extremely powerful, but we need to understand its limitations. It can see things and patterns we can't see – there is the ability using AI to be able to start to understand more about customers. What we've got to be very careful of is profiling […] We need to make sure what we are doing is relevant across demographic groups, racial groups. A lot of it is designed by males. It's very good with older white males, not very good with females, less good with Asians, very poor with Black people. We have to be cognisant of its limitations.**

of standardization in the kind of data – what is measured – and the format in which the data is collected – how it is measured – can also make tool development, research, and collaboration difficult, as it limits the use of common approaches.

A last barrier related to data concerns **biases**. Often tools that employ artificial intelligence use publicly available datasets to conduct their analyses. These datasets can be biased and lead to unintended consequences, like producing tools that work more effectively with certain demographic groups while profiling others. We need to be alert to these potential biases and ensure the resulting tools are relevant across appropriate groups.

05

Limited knowledge of, openness to, & industry support for tools makes uptake a struggle

One difficulty mentioned across sources was the struggle to achieve tool uptake. Digital tools in general are underutilized (<10%) compared to low-technology solutions (e.g., telephone-based therapy, 28%; Molfenter et al., 2018). Stakeholders noted that uptake for (voluntary) digital tools for gambling sat around 1-2% for (online) breaks in play and land-based limits. Several barriers to tool uptake were identified, which are included in the box below.

Barriers for gambling digital tools uptake

- There is **limited awareness** of what digital tools exist,

- People often view the tools as **irrelevant** – they don't know who they are for, when to use them, or what to expect,

- Some people are **uncomfortable** using tools that are technology based, like older adults and those who play in land-based venues,

- People are **unmotivated** to use the tools (Burns & Birrell, 2014; Hollis et al., 2017; Lanford et al., 2019),

- Tool use is **stigmatized**, with many seeing tools as relevant for those who are experiencing harms and not those looking to prevent them, and

- Digital tools can be **inaccessible**, from unreliable rural internet, inability to afford devices, use of non-fluent language, and lack of compatibility with computer readers used by blind people.

> "
> **There is no shortage of well-intentioned evaluated tools. The barrier is population wide take up.**

> "
> **The way they are presented, the minimal uptake, simply because 80% of people don't regard it as necessary. The failure to resonate – they don't need them. It should be presented as budget management rather than problem gambling elements.**

> "
> **You have videos of the information, like Michael Wohl's are quite useful, but then you have to see what motivates a person to go online to see how a [slot] machine operates. It's analogous to knowing how a vehicle works, how the carburetor works – it does what you want it to do. Same as the majority of people with gambling machines – they want to know if they're going to win or not.**

> **The stigma behind tool usage – they are only for those who are experiencing problems rather than trying to prevent them happening in the first place. 'Why would I set a deposit limit when I'm in control?' People don't see that moment happening when they cross that threshold.**

If someone overcomes all of these barriers and looks for digital tools to use, they can be **overwhelmed with the sheer number** of them available. In 2017 there were roughly 318,000 health-related apps available for download – more than double from two years before – with over 200 apps being added each day (IQVIA, 2017). Once a person chooses an app, they may have it discontinued as many mental health apps fail within six months (Magnavita, 2018) – often because of issues with continuous user engagement and operational costs (Bucklen & Abbott, 2014). The market for gambling digital tools is similarly flooded with offerings that each do something slightly different. Confusion over which tool is the right tool can lead people to abandon their search or try out tools that are not right for them.

Industry operational realities can further complicate attempts to support digital tool uptake. Examples of operator-focused barriers noted by stakeholders include:

Many players are **anonymous** – they don't use player cards or loyalty programs – which limits opportunities to encourage tool use or make them available,

A large percentage of **industry employees** are casual, turnover quickly, and are staff of third party organizations, which limits the ability to use staff as a knowledgeable and consistent resource for player education on digital tools,

It can be difficult to develop **collaborative partnerships** with key stakeholders, particularly with underrepresented groups, to support with encouraging use of the tools (Lanford et al., 2019), and

If **public opinion** of operators isn't overly favourable – where industry is not seen as genuinely interested in their customers' wellbeing – people may be mostly dismissive of the tools on offer.

> **I think that we're getting to the point where there are a lot of tools available. The danger is that it can be confusing to a customer which tool is right for them. What we see happen is that people will self-exclude for the wrong reasons.**

05

Behaviour change, tool limitations & contradictions, & evaluation struggles can limit engagement & impact

Once people decide to use a digital tool, there are yet more barriers to the tool having the intended use by and impacts for people. It can be challenging to achieve **regular or long term engagement** with the tool, like scheduling additional touch points or implementing further digital interventions, which can limit program impact (Burns & Birrell, 2014; Hollis et al., 2017; Lanford et al., 2019). For example, with mandatory limits, initial use is largely universal but overtime people don't continue to use the tools as intended, increasing limits over time or setting them aside all together. For treatment focused tool, attrition is high. One platform reported a 50% drop off after the initial assessment. Many factors can help explain low levels of engagement, like the tool functionality, relevance, user experience, low barriers for withdrawing, and level of user commitment.

A factor that can contribute to struggles with engagement and in particular achieving intended impacts is the reality that **changing people's thoughts and behaviours** about gambling is very difficult. Achieving behaviour change is such a feat for many reasons, some of which are outlined in the box below.

Difficulties of behaviour change

Many **concepts are complex and difficult** to accept and understand (i.e. how gambling machines operate, return to player),

People have **difficulty effectively evaluating evidence** given to them (i.e. akin to anti-vaccine sentiments),

Cognitive, learning, and behavioural science (i.e. motivational interviewing) approaches are needed to make changes (which take time and effort to implement),

Knowledge gained outside of the gambling environment **doesn't always translate** to behaviours in the gambling environment (i.e. people won't necessarily apply what they learned to their play), and

Prevention messaging works when it is the **dominant message** people are getting about gambling (which due to the magnitude of gambling advertising isn't currently the case).

One of the problems is that you find a lot of drop out in internet based interventions and of course anything like a CBT program they want you to do all the weeks of the program. I think there's a much more likely tendency of people where the low barrier [of digital services] works both ways – it gets people in but they are also more likely to drop off when they think they've got what they want. One of the challenges is making sure you have some kind of commitment – ways of increasing accountability of your participants to really follow through with the program. You get commitment in writing that they are willing to be engaged but also making it easy to stay engaged in the program.

05

Stakeholders noted an important **contradiction** that may limit the possible impacts of digital tools. In being delivered through technology, digital tools may exacerbate the difficulties or enable behaviours for which support is being sought. For example, if someone is experiencing harms from gambling using mobile apps, placing safeguards like blocking software on the device may be useful at limiting access, but using digital support tools may be less appropriate as this increases use of the device associated with the problematic behaviour. Similarly, treatment approaches often encourage people to engage with their social networks and in social behaviours, but reliance on digital tools can foster isolation.

> **If a gambler is accessing [gambling] apps which increasingly they are, putting safeguards onto that device is key, but there is that contradiction where you may be placing the recovery app onto that device as well. In some respects you're restricting access and on the other you're increasing it.**

> **Issues with engagement and implementation – systems aren't well designed. It's more difficult to do things on their phones where it's very small screens, engaging in a noisy environment on the bus or whatever. Trying to create that one on one engagement – it's difficult.**

> **Presenting the cognitive information that resonates with the individual and that can be easily comprehended. Our research shows that many people don't know things like return to player percentages even when you explain it – many counsellors have difficulty. How gaming machines operate, reinforcement, excitement – these are complex issues that people can have difficulty accepting. […] When you try to explain them you can't win over long term, they say they win often.**

05

Although digital tools offer several benefits over analog options, as outlined at the beginning of Section 3, there are also some **important drawbacks** that may limit engagement and impact. Some of these drawbacks are outlined in the box below.

Drawbacks of digital tools

It is more difficult to assess and support **literacy difficulties**,

An inability to support those who have **low (digital) literacy** *and* **don't want face to face support** (i.e. the traveller community),

Limitations in deescalating and supporting people who are **distressed or triggered** (i.e. people can log off of video call),

People can engage in **impression management** (i.e. editing what is said via written message) which can be a barrier for effective treatment,

The difficulties of recreating the **level of connection** of in-person meetings (i.e. small screens, noisy locations), and

Focus on digital tools can reduce investment in **land-based support** in communities with the greatest need.

Evaluation can support the uptake, engagement, and impact of digital tools by showing potential users and stakeholders that it is of good quality, appropriate, and effective. However, the majority of the gambling digital tools reviewed in the environmental assessment have not been independently and formally evaluated.

> "
> **I think the biggest barrier is that we don't know what works. We don't know what works for who and in what situations and what's out there at the moment.**

This leaves the field with a lack of clarity on what the best content and formats are and what works for who. Within the general lack of evaluation, stakeholders identified several barriers to **carrying out tool evaluations**:

- It can be difficult to appropriately **define success** (i.e. tool uptake among unintended audiences),
- Documenting sustained impacts is **time consuming**,
- It can be hard to have a **sufficient number** of users,
- It can be a struggle to obtain data on the **right measures**,
- It can be unethical to compare results against a **control group** who don't receive any support to isolate impacts (i.e. for those seeking treatment), and
- There must be a commitment to **implementing learnings**, like abandoning tools that are not shown to be effective.

05

This section identified several areas of improvement for digital gambling tools. The key **barriers and opportunities** for tool creation, uptake, engagement, and impact include:

Barriers & opportunities for gambling digital tools

Limited **regulatory requirements** focused on safer gambling, which can limit incentives for digital tool development and delivery,

As a result operators can place a **low priority** on digital tools,

Limited funding is available for charities and independent organizations for tool development and maintenance,

The **rapid pace of technological change** means that tools can become obsolete or out of date quickly,

Laws for data protection can limit tool development and **user concerns about data privacy** limit uptake,

Data often isn't available in the formats required for tool creation, research, or collaboration,

Tools can be **biased** if they use unrepresentative datasets in their creation,

Widespread uptake is hard to achieve because people aren't **aware** of the tools, don't see them as **relevant**, feel **uncomfortable** using them, are **unmotivated** to, **stigmatize** tool use, and may **not have access** to them,

There is an **overwhelming number of available tools** available and it's unclear which ones are best for who,

Operators are limited in their efforts to support tool uptake due to the **anonymity** of many players, lack of steady **staff**, difficulties securing **partnerships**, and potentially unfavourable **public opinion**,

Achieving thought and **behaviour change is difficult**, as many concepts and approaches are **complex**, people have a hard time **evaluating** evidence and **applying** their learnings, and there are **competing messages**,

There are important **drawbacks** and **contradictions** to digital tools, like the inability to deliver a similar **level of service** and providing support digital problems using **digital means**, and

Tool evaluation difficulties, such as **measurement** and **sampling**, leave gaps in knowledge of what tools are effective and under which circumstances.

How can we move forward

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How can we move forward

Now that we have a lay of the land of the gambling digital tools ecosystem – the range of tools out there, their characteristics, promising practices, and barriers and areas for improvement – we can consider how to move the field forward. In this section, we focus on approaches for supporting promising practices and addressing areas of need, with the ultimate goal of building a gambling digital tools ecosystem around people that can provide them with the most appropriate and effective resources.

Research finds that the most common strategies for promoting engagement with digital tools include tailoring content to people and groups, strategic delivery of information and services (i.e., time and place), use of incentives and reminders, provision of social support, follow-up messages, and use of multimedia to deliver content (Milward et al., 2018). The stakeholders we spoke with echoed many of these approaches and identified several others, centered on **delivery format, standardization, holistic** as well as **tailored** tools, tool **visibility**, digital tool **culture**, and **collaboration** and **evaluation**.

Areas of improvement for gambling digital tools

| Deliver tools early & through direct messaging | + | Identify a standard suite of tools | + | Continue to work towards a full player view | + | Tailor tools based on demographics, behaviours, & risk level | + | Increase tool visibility through active & right timed promotion | + | Create a culture among industry & people around tool use | + | Engage in more collaboration | + | Assess tool impacts through independent evaluation |

06

Deliver tools early & messages directly

There are opportunities to adjust the ways digital tools for gambling are delivered to people to improve their uptake, engagement, and impact. Several stakeholders spoke about the need to interact with people **early in their player experience**, to support uptake and prevent gambling-related problems down the line. While most digital tools for gambling are focused on supporting people at high risk, efforts are needed to prevent the large numbers of those gambling at low risk from moving up the spectrum. Operators should be communicating with and introducing digital tools to players proactively, before any problems occur. There is also need for a broader cultural shift to a prevention focus, which can support these operational changes.

> **I think interacting with all players from day one, so not waiting until a player has gone far along the spectrum until you start communicating with them. You do that day one and I think that's the good part of the Positive Play concept. Doing things proactively before a player has developed the risky behaviour or problem gambling behaviour.**

Research shows that **SMS messaging** is used quite successfully in health and substance interventions, particularly for targeted populations. SMS health messages have been found to support breastfeeding and coping among new mothers, tobacco risk knowledge among women and visible minorities, and smoking cessation among new mothers (Gallegos et al., 2014; Müssener et al., 2016; Prokhorov et al., 2017). By extending interventions to new environments (Barak & Grohol, 2011), increased use of SMS messaging or other direct messaging as a component of digital tools for gambling can support engagement and impact by reaching people where they are.

06

Identify a standard set of tools

Numerous stakeholders outlined the need for a **standard suite of tools** – a 'one stop shop' – that is consistent across platforms, both land-based and online. Offering a suite of tools was described as 'well understood as table stakes for you to be in this space – appropriate and necessary'. A standardized suite can also support uptake of and engagement with tools. The benefits of this approach are outlined in the box below.

Benefits of a standard suite of tools

| More seamless **integration** of available information, tools, and support,

| Supporting **player choice** to try and use tools,

| Having a **centralized location** for all tools, making them easy to find,

| Broad offering and use of **recognized, evidence-based** tools,

| Meeting **people's expectations** for a menu of options,

| Having available tools for players at **all points in the spectrum** of play and harm,

| **Consistency** across platforms, making tools more user friendly,

| Providing 'a **roadmap** for users to identify what tools are most important for their current stage of problem gambling' or gambling involvement, and

| Facilitating player **awareness**, **understanding**, and **education** on tools.

> **There's probably an opportunity to standardize tools across brands and operators, to get over that education piece. If there was a standard set of tools you could educate on a wider scale.**

> **I'd like to see much more in terms of a series of tools that people can select and try and if they like it they use it, and if they don't like it they don't use it. Things like budget setting – time is a big one.**

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In terms of what digital tools should be included in a standard suite, stakeholder recommendations for gambling operators include:

- Deposit budget,
- Time budget,
- Time out,
- Self-assessment,
- Self-exclusion, and
- Risk analytics.

Such a standard set of tools would outline the types of tools and their features – like limit setting tools that are flexible and actively promoted – and not specific apps or trademarked tools versus others.

> "
>
> **We're in a stage of which tool we should go with or not. I believe in a broad set of tools – risk analytics, self-assessment reflection on the site, segmenting messaging based on what you're seeing for players. I believe in that set of basic tools and the difference is how well you are able to engage people.**

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Trade associations, regulators, and independent organizations can play an important role in outlining what the most appropriate standard set of tools would look like. Some key steps in delineating a standard suite as outlined by stakeholders would include:

1. Reviewing **evidence** to identify the highest performing tools,

2. Outlining how best to **combine** the most promising tools,

3. Considering how tools will be **tailored** (i.e. demographics, game type, play/risk level),

4. Identifying operational needs and guidelines for **implementation**,

5. Detailing how to approach player **education and messaging**, and

6. Generating **buy in** (i.e. through trade associations, regulation).

> **We need to review the established knowledge on effective deployment of different tools and how to combine them into a suite so you have an overall platform that optimizes the outcomes that we want. I don't know of any studies or overall approach or framework, guidance – like the Insight studies [done by the Responsible Gambling Council] – that type of study or paper presentation from operators that shows how we combine those things as basic but optimized towards deployment, the policy decisions, the ways you position them, and communicate them to players. That is a main gap.**

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Strive for a full player view

Although challenging to achieve due to several of the barriers noted in Section 5, many stakeholders noted how we should continue to strive for the holistic understanding offered by a full player view, where information on play across platforms is consolidated. The benefits of a **full player view** are outlined in the box below.

Benefits of a full player view

▎ Linking **behaviours** across operators, land-based and online, and over time,

▎ Right timing of **messaging** based on play across platforms,

▎ The ability to share **limits** across operators, and

▎ 'Providing consumers with better access to their own information and **better context** around their data'.

In these ways, a full player view would support the effectiveness of digital tools, allowing them to make use of the most comprehensive data. The steps required to achieve a full player view as outlined by stakeholders include:

1. Building **collaborations** between external stakeholders to share access to information,

2. Establishing a way to **track** players across platforms (i.e. single ID), and

3. Explore ways to support appropriate **data sharing** through/within existing regulation and policy in the name of improved consumer protection.

> **I think there's an opportunity for us to look at the whole player and all of their playing involvement. When we think about right timing, right messaging – thinking not just in this space that they're in, but in all the spaces that they're in and what kind of information they need at that point in time. But again that requires collaboration amongst external stakeholders as well. So while the technology is there, there's work in the relationship building, in the buy in to ensure that we have access to that kind of information to be able to give player relevant and meaningful information for them in that moment.**

06

Tailor tools to demographics, behaviours, & level of risk

Tailoring tools to actual or intended users can support uptake, engagement, and impact by making the content and delivery most relevant and appropriate. Tailoring can be complex to achieve, as illustrated below, and can be informed by user input (as discussed in Section 4). In the first instance, tools can be tailored based on who the people are that are using the tools – **tailoring based on demographics**. Multiple sources touched on tailoring based on **age**. One stakeholder noted that tools for young people have 'a stronger responsibility around safeguarding', in part because of their age and their increased level of risk. Useful tool content for young adults is outlined in the box below.

Useful content for young adults

▎ Increasing *knowledge*,

▎ Correcting erroneous *beliefs*,

▎ Personalized *feedback*,

▎ Shifting *behaviour*,

▎ Addressing *stigma*, and

▎ Discussing *peer influence* (Ellis et al., 2013; Gainsbury et al., 2018; Kohlstadt et al., 2015).

> **I think the tailoring goes both ways – allowing the customer to tailor to their needs and we also tailor their offering. The riskiest group of players that we have is young people, males. Marketing to them in the same way you market to gen pop would be really ridiculous. It's making sure you tailor your message and your offering. It is a lens that we have, more so in the marketing domain than in the tool domain.**

Research also shows that older players prefer messages about limit setting (Gainsbury et al., 2018). In terms of formats, those that work for young adults include online CBT programs and peer-developed social media messages (Clarke, Kuosmanen, & Barry, 2015; Ellis et al., 2013; Hollis et al., 2017; Kohlstadt et al., 2015; Papadatou-Pastou et al., 2017). For young men, preferred approaches include self-help and action oriented resources (Ellis et al., 2013). Stakeholders spoke about a trial being run by Sky Betting and Gaming on limit setting with young adults 18 to 21 years. At registration, those in this age group are required to set a limit from a shortened list compared to what is offered to older players, with many selecting the (relatively low) default of £25 a week.

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Research also supports tailoring gambling digital tools by **gender** and **ethno cultural background**. Women experience internal – denial, fear, ambivalence, stigma, shame, and feeling misunderstood – and external – time, distance, cost, and a lack of practical information – barriers to gambling treatment which can be targeted in tool development and promotion (Kaufman, Jones Nielsen, & Bowden-Jones, 2017). Women are also frequently the spouses of those with gambling problems, providing help and care (Patford, 2009), and could benefit from tools for affected others.

Content that is tailored and relevant to the player's culture, such as the needs of family, friends, and communities, can support digital tool impact by encouraging self-efficacy and self-recovery (Clarke et al., 2007). Community campaigns can leverage social networks and community leaders to address problem gambling denial, stigma, and shame, thereby encouraging tool uptake (Ibid.).

Digital tools can also be **tailored based on people's behaviours**. **Personalized feedback**, were information on a person's own play is fed back to them, has been found to be impactful in several research studies. Personalized feedback can:

- Have some of the *strongest* impacts on gambling behaviour (Forsström et al., 2020),
- Increase *responsiveness* to safer gambling advice and *decrease betting* (Phillips & Landon, 2016),
- Decrease *gambling losses* by up to 30% (Jonsson et al., 2020), and
- Decreased *wagering and self-report gambling problems* among at-risk college students (Martens et al., 2015).

Although personalized feedback has significant positive impacts, which can support the effectiveness of digital tools that employ it, these tools are often not used over the long term (Forsström, Hesser, & Carlbring, 2016). Stakeholders also discussed how personalization can be used to encourage engagement with digital tools. Analytics can be used to tailor what types of messages people see, what information they are provided, and what tools are recommended to them, to present them with what would be the most relevant.

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Beyond feeding information back to someone about their own behaviours, machine learning can also be used to provide **normative** messages that situate a person's behaviour in relation to the larger body of people or players as a whole. Stakeholders noted that these messages can be impactful because people generally misperceive what 'normal' is. Normative information can empower players by giving them context around their play that they can use to make informed decisions, supporting 'data informed behaviour change'. It can also be used to identify potential flags of problematic behaviours – ones that lie outside the range of what most other players are doing – earlier to prevent harms. Normative approaches can support tool uptake and engagement, as people are often interested in knowing what is 'normal' and where they rank relative to others. Uptake can also be encouraged through messaging that makes tool use seem like the 'normal' thing to do: 'Join others who have made a deposit limit'.

Stakeholders noted some specific behaviours that can be the focus of personalized or normative tool tailoring. Behaviours that can be used to tailor tools or tool messaging include:

- **Banking behaviours** that may be associated with gambling harm – like deposits, withdrawals, declined transactions, or number of banking relationships,

> " Humans are terrible in knowing what's normal. We tend to really, really misperceive all about norms and people can be very engaged to find out what is actually normal. So just kind of comparing a week in reality to what we think can be a really good way of engaging them. People like to know where we stand. People like know where they're ranked.

- **Gambling behaviours** linked with harm – like spend, increasing limits, or highest losses, and
- **Game type** – land based or online, with a particular focus on sports betting.

Stakeholders noted that those who play different games play in different ways, so their needs for and use of tools will be different. The type of people are different – their age, gender, education, income – as are their information needs – how games work, the odds of winning. For example, studies show that those who engage in skill-based gambling like poker prefer content related to the odds of winning and performance feedback, while all gamblers are receptive to positive and non-judgemental safer gambling messaging (Gainsbury et al., 2018).

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Lastly, stakeholders discussed how most of the tailoring of digital tools to date has been focused on **risk level**. Player risk level is often identified through analytics and risk indicators, like play patterns and support interactions. Both the tools themselves as well as messaging about tools can be tailored based on risk level. Messaging for low risk tools must avoid framed them as being about addressing harm but instead focused on prevention, while messages for high risk players must overcome denial of support needs.

> **In terms of format there needs to be different options available. Not every gambler gambles in the same way. Someone who gambles in a digital casino can be completely different if one's a roulette player and one's a poker player. You bring in the element where you've got people gambling next to each other and chatting – they will interact with tools in a different way than someone who is gambling on their own, or sports from casino player. The more formats available the better for tools.**

> **We are getting millions of records and years of records of payment providers and we're going to eventually try to tie that to gambling behaviour so that we can determine whether or not there is a connection to any sort of payment behavioural patterns. […] And in this case, we mean deposit or withdrawal behaviour or declined transactions meaning you are more likely to be a problematic player or exhibit problematic play.[…] We may be able to trigger different messaging and potentially through different channels. So now it may come from a casino, but it also may come from your credit card or your ATM or your bank and the messaging may be different.**

> **I believe in risk segmentation and risk being informed by the indicators that you see, things like calls to the support line, a whole full range of risk indicators, play patterns based on data. Combining those and catering messages to what risk profile is presented by any given player.**

06

Increase tool visibility through active & right timed promotion

To support initial tool uptake and sustained use, stakeholders noted how more could be done to increase the visibility of digital tools. In addition to tools being easy to find as outlined in Section 4, digital tools should be **actively promoted**. Attention should be brought to the tools that are available, their benefits, and who they are suited for, which can support people's awareness of and comfort with the tools. Ways to actively promote tools are included in the box below.

> ❝
> It's not only that they exist but that they are promoted to customers, so they know they are there and they can try them. Not just a logo at the bottom of the screen, something that really pushes it. If they do that, customers will get used to the idea that these tools are available. At the moment it's not – people don't feel comfortable talking about them.

Ways to actively promote gambling digital tools

| Through **posters and brochures** (with inclusion of QR codes),

| **On platform** (i.e. reminders, pop ups),

| Alongside **promotion of other features** like latest bets, and

| In **public talks**, presentations.

06

Uptake can also be supported if tools are presented or recommended to potential users at the **right time** – in particular when people are open to them. For example, research shows that intervening after a win or loss among high risk players increases the likelihood they will be receptive (Phillips & Landon, 2016). If tools are presented at the wrong time, it can make people confused or annoyed and they may use the tools in unintended ways. Right timings outlined by stakeholders are included in the box below.

Right timings for tool introduction or recommendation

▍ As 'a **natural part** of playing',

▍ Upon **sign up**, as part of customer acquisition process,

▍ During **key betting events** (i.e. sports championships),

▍ With some **regularity** (i.e. via emails, messages),

▍ As an immediate response to **behavioural triggers** (i.e. add extra account), and

▍ When **motivated or receptive** (i.e when implementing other tools, between activities (i.e. between sessions), or when logging out or withdrawing).

❝

We spend a lot of time on online gambling sites looking at the customer journey on play but not on responsible gambling. […] I think the lesson from social media of removing sludge is how do you make the responsible gmabling experience available when people need it?

06

Create a culture around tool use

At the highest level, digital tool uptake and impact can be supported by **creating a culture** around their use. At the industry level, this can include building a **culture of responsibility**, where player wellbeing is a central focus of the organization. Stakeholders encouraged the industry to acknowledge that the product they provide poses a certain level of risk, and thereby to support players through preventative and consumer protection approaches like offering digital tools. A key piece of building this culture is shifting focus from profit to player sustainability, which does ultimately benefit the business in the long run. This shift can be supported by prioritizing safer gambling operationally, like tying staff bonuses to safer gambling metrics like digital tool use. A consumer-focused industry culture can also build player loyalty, where players may choose to play with operators where they feel better protected.

> **Operators need to provide these for their customers. Like the car analogy – nobody says to you 'if you'd like brakes with your car and that's extra'. It comes as standard. In the industry we need to understand that what we provide is risky for some people.**

More broadly it can influence public opinion, helping players feel that operators value them as customers by putting safeguards in place. As public opinion can influence regulation, this type of shift can prevent overly restrictive regulations that can limit innovation.

Stakeholders spoke in some detail about how **regulation** can support the development of a culture of responsibility as well as the creation and success of digital tools. Regulation can contribute on both of these fronts by:

- Encouraging *innovation*,
- Including provisions for *data sharing* (while maintaining privacy and with a focus on consumer protection),
- Facilitating the piloting of digital tools in *real world* environments,
- Supporting *independent research* using industry data (including the collection of standardized data),
- *Evening the playing field* in the development space by making tools a requirement,
- Identifying standard or well performing tools to create and centralize *buy in*, and
- Providing industry *incentives* for commitment to safer play (i.e. tax break for meeting thresholds).

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> **If you had something that looked more like a 1 or 2% tax on some key responsible gambling or problem gambling metric – something like the Positive Play Scale. If you score above 90%, you get a 1% discount on your taxes. It would force everyone to work much more closely on solving that problem, as there is more of an incentive to do so.[…] The real meat of that idea is about creating a system where there are incentives for market forces to take over, and to do that you have to put a price on responsible gambling, and that price could be up to 1 or 2%.**

> **If we educate our staff, they can educate the customers and that's when you get better coverage and usage of tools available to them.**

Training can also be an important piece in building an organizational culture of responsibility, while also being critical for encouraging and supporting people to use digital tools. Stakeholders noted that if industry staff are trained on what tools are available, who they are best suited for, and how they work, they can discuss and recommend them to players. Treatment providers can also benefit from learning about available tools, so they can recommend them to clients, as well as training to help increase their comfort and skills in providing treatment digitally (i.e. building rapport digitally, solving technical problems). A key piece for training on digital tools is to demonstrate their relevance – that they aren't just a matter of compliance but how they actually support those who use them.

Education on digital tools can serve a complementary role to employee training. Stakeholders spoke about how tool uptake can be increased if potential users are made aware of the how and why of the tool – how it works and what are the benefits – which can bolster their motivation to use them. Education can also increase comfort and therefor uptake among those who are less technologically adept. This enhanced understanding can also lead to improved impacts. Research finds that the use and impact of digital tools can be improved when they are accompanied by broader jurisdictional education on safer (gambling) practices (Floros et al., 2013).

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Education can look like:

- Clearly demonstrating *who* the tools are for (i.e. point along the play spectrum),
- Providing *definitions* of terms like turnover,
- Showing *how* to budget for spend, and
- A visualized story on *how* to use tools as part of sign up.

> **You get buy in from the players so that they actually understand what it is that they are doing and by understanding what they do the effectiveness of what they do also increases. I think that goes across all the tools and resources and things that we can potentially talk about today. […] So having a button that's available all the time – yeah, it might be a good idea – but if the player doesn't understand what it is that they're doing and why they're doing it, they won't do it anyway.**

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Building a culture of responsibility, delivering employee training, and providing education on digital tools can all contribute to **normalizing** their use. Stakeholders largely agreed that a key goal and facilitator for uptake is for the use of digital tools to become 'a natural action – like reaching for the seatbelt in a car. The first thing you do when you sit down is you set a budget'. Normalization would look like tools being available for people across the spectrum of play, a significant reduction in people's hesitancy or discomfort in using them, and high levels of actual use. Normalization of safer gambling approaches in general would also support the normalization of digital tools specifically. Approaches for working towards normalization are outlined in the box below.

In addition to supporting the normalization of digital tools, **gamification** can improve tool impacts, achieving similar impacts to traditional methods (particularly over time) and being more enjoyable and acceptable to some groups like those who are unmotivated (Barak & Grohol, 2011; Horne-Moyer et al., 2014; Meixner, Baumann, & Wollesen, 2020; Scholten, Luijten, & Granic, 2019). Stakeholders cautioned, though, that gamification should avoid using features that may be triggering (i.e. coins) or may distract users from the tool's key messages (i.e. core safer gambling concepts).

Approaches for normalizing gambling digital tool use

| Actively *marketing and promoting* digital tools,

| *Speaking publicly* about digital tools,

| Using *normative framing*, describing tool use as mainstream,

| *Gamifying* digital tools (i.e. self-assessments),

| *Integrating* digital tools into technology/apps already being used, and

| *Educating young people* on gambling, risk mitigation strategies, and tool use.

> **Make them part of the advertising to destigmatize. I'm not sure operators would be keen on that. Get more people speaking about them. We've had a lot of media attention around gambling. I've mentioned in my interviews the practical measures around blocking software. Having those spokespeople and heroes speak about them publicly and in the media would help destigmatize.**

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One key element of gamification – **user incentives** or rewards for engagement – was discussed widely by stakeholders. As a form of gamification, incentives can support with normalizing tool use by making it more widespread and mainstream. Incentives can serve as a nudge for people to use tools, by way of 'harnessing the expectations and desires of users.' They can encourage continued engagement by providing positive reinforcement for tool use. Like a culture of responsibility more broadly, incentives can also lead to greater customer loyalty.

> **It shouldn't be negative but positive reinforcement around this. So as people play, when they log on it's 'Congratulations you've set your budget every time you've played. You are within the 3% of our customers or 40% who do this.' These messages reinforce the actions of the customers to try and get them to gamble more safely. So I think that's the nudges you give people to make sure that they do it, and the pats on the back as opposed to the stick.**

In this way, any costs associated with incentives can be recouped. Incentives can be provided for a variety of safer gambling actions, like viewing information/videos, using a play calculator, setting budgets, sticking to them, taking a break, or completing a self-assessment. Some of the many forms of incentives noted by stakeholders, including both gambling and non-gambling focused, are outlined in the box below.

Gambling and non-gambling incentives for tool use

- Congratulatory *messages/notifications*,

- *Badges*,

- Retailer *vouchers/discounts* (i.e. food, beverage, show tickets),

- *Loyalty points*,

- *Free-to-play* coins, and

- 'Modest *wagering opportunities*'.

Stakeholders cautioned that incentives may not be enticing for players over the long term, where education, tool integration and quality, and player motivation can have sustained impacts. Incentivizing tool use can also potentially shift the focus from being mindful about gambling decisions to what the next play will be – particularly among those at high risk of harm – going against the purpose of the tool. Additionally there was a lack of consensus over the appropriateness of using gambling-focused incentives, like free spins. Some stakeholders felt that these types of incentives are counterintuitive, since digital tools are largely aimed at limiting gambling behaviours. Others felt that doing so 'speaks the language of the gambler' – using one of the reasons they play to also get them to view and use safer gambling information and tools.

> **We are giving away money just for breathing – we might as well give money away from completing a five question quiz on responsible gambling and how they can protect themselves. The best way to get the engagement is to provide them something. They won't think they have that issue or they just won't care about it – it won't be on their radar. An offer would give them pause to pay attention to what we are trying to say.**

06

Maximize & assess impacts through collaboration & evaluation

Several of the barriers for gambling digital tools outlined in Section 5 can be overcome – and a culture of responsibility can be fostered – through **collaboration**. Maximizing the uptake, effectiveness, and impact of digital tools requires a wide group of stakeholders in the field – governments, regulators, operators, players, media, sports leagues – to understand the value of and prioritize safer gambling. Some of the opportunities afforded by collaboration are outlined in the box below.

> **Holistic – taking into consideration what consumers want and how it works, also what the regulator requires and what the industry views are, but they all need to come together to develop the ideas as to what's needed. It's got to be balanced. Ultimately it's about allowing individuals to take control in what they do, be in control of what they're doing. It's a fine line to Big Brother.**

Opportunities for gambling digital tools afforded by collaboration

▎ Arm's length **funding** of tool development and research using user data,

▎ **Reduced competitiveness** between prevention and treatment fields (i.e. for funds),

▎ The inclusion of **diverse perspectives** from project inception (i.e. various disciplines, cultures, and experts, including both content and user experience), which can support tool success and normalization,

▎ The development of tools that meet all **stakeholder needs**, with the inclusion of the voice of lived experience,

▎ The successful **marketing** of tools,

▎ Mobilization of information on effectiveness of safer gambling approaches used by **industry**,

▎ Identification of **markers of harm** and appropriate tailored messaging,

▎ Increased awareness of and linking with **complementary digital tools**, like other gambling or mental health tools, and

▎ The creation of a **layered safety** net of tools and reduced friction between tools.

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> **You don't want just designers and engineers to be part of product design. You also want psychologists, ethicists. The idea is that you are creating a holistic tool as opposed to a tool or product that exists from the get go – normalizing healthy gambling and go from there, from the initial phases. When you're doing tech development you're not just using your imagination but your moral imagination. This is a way we can tie in diversity in a really easy way. […] There's an important element in this concept. Diversity of thought comes from diversity of experience.**

> **The future direction is around understanding who engages and how to improve engagement. The clinical intervention part is set – we know what they should include. Providing them in ways that people will embrace and engage with them is the challenge.**

> **There's lots of people doing lots of things. There needs to be a review on what is out there and what's working – pull those bits together to outline what the best pieces of software are.**

Stakeholders agreed that the **evaluation** of digital tools is critical. Research should occur both during the development phase, to test the design and content of the tool, and upon roll out, to examine reception and impacts. To address current gaps in understanding, digital tool evaluations should determine:

• What are the *highest performing* tools,

• What approaches *work best for who*,

• Ways to *link* system data and self-report data,

• Best practices for *markers of harm*, and

• Document impacts on *attitudes and behaviour* (not just awareness).

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To achieve these goals, recommendations for tool evaluations from stakeholders and the rapid tool assessments are outlined in the box below.

Recommendations for gambling digital tool evaluations

| Carefully identify the **goal** of the tool, in particular whether it's focused on prevention or support,

| Collect data on **demographics**, referral **pathway**, and **user experience**,

| Use **validated measures** in self-assessments and track changes in these **over time**,

| Assign **anonymized ID** numbers to users for comparisons across outcomes, and

| Be **longitudinal** and use **randomized** control trials.

After outlining the barriers and areas of improvement for the gambling digital tools field in Section 5, this section focused on ways that we can move forward in addressing areas of need. Key next steps include:

Areas of improvement for gambling digital tools

| Players should be interacted with and made aware of digital tools **early in their player experience**,

| SMS or other **direct messaging** can be used to support engagement with digital tools,

| A **standard suite of tools** should be identified and offered consistently across platforms, to support integration, player choice, awareness, and understanding,

| Efforts should continue to strive for a **full player view**, to provide better context for players, right timing of messaging, and sharing of limits across platforms,

| Tools should be tailored to **demographics** – like age, gender, and ethno cultural background, people's **behaviours** – like banking transactions, spend, and game type using personalized feedback, normative messaging, and **risk level**,

| Tools should be **actively promoted** on and off platform and at the **right time**, including regularly, upon sign up, and in response to behavioural triggers and motivation,

| A **culture of responsibility** for player wellbeing should be fostered among industry through **regulation** and employee **training**,

| A digital tool culture can be supported more broadly among people and potential users through **education**, **normalization** of tool use, use of **gamification** in tool creation, and offering users incentives for engagement,

| **Collaboration** should be mobilized to support tool funding, the inclusion of diverse perspectives and insights, and the creation of a layered safety net, and

| **Evaluation** should be used to identify high performing tools, what works for who, and impacts on attitudes and behaviours.

Key considerations & next steps

07

Key considerations & next steps

This report uses research literature, environmental scans of gambling and mental health digital tools, rapid assessments of tool user data, and consultations with international stakeholders to consider how can technology be used to deliver information and support to those across the player continuum of gambling involvement and harm? In doing so, it describes the ecosystem of gambling digital tools, reviews case studies of effective tools, outlines promising practices, discusses the barriers and areas of improvement, and proposes ways to target areas of need in moving the field of gambling digital tools forward. Findings from this report should be taken forward by future research and digital tool initiatives to confirm the usefulness of promising practices and recommended approaches for addressing areas for improvement.

The results of this work will form the foundation of a series of **roundtable discussions** with international stakeholders to generate actionable next steps for implementing the recommendations outlined below. The findings of this report have also spurred a **follow up piece** of independent research, aimed at identifying a standard suite of tools for us across the field, as outlined in Section 6.

The key insights from this piece of work center around **what we need to do more** and **what we need to change**.

07

What we need to do more

Focus on user needs & experience	✔ Incorporate **user input** and consider **user experience** (i.e. visual appeal, intuitiveness) in tool creation ✔ Ensure tools are **easy to use**, making use of nudges and predictive algorithms ✔ Make tools **flexible**, with choice and numerous options ✔ Offer tools at **no cost** ✔ **Integrate** tools for lower risk play into existing platforms, like gambling or mental health apps
Use evidence-informed approaches	✔ Increase understanding with treatment tools using evidence-informed **clinical approaches**, like Cognitive Behavioural Therapy or mindfulness, for both guided and self-guided tools ✔ Increase understanding for lower risk players using **evidence-informed approaches** like psychoeducation (i.e. account information)
Offer broad supports	✔ Develop additional digital tools for those who are at **lower levels of risk** ✔ Use **people** to complement digital tools, like treatment professionals and customer service ✔ Layer tools for higher risk players with other relevant gambling and/or mental health tools
Ensure tools are visible & relevant	✔ Make tools **easy to find**, like being accessible by one click and/or featured prominently ✔ **Frame** tools as relevant to target groups, using approachable language
Collaborate	✔ **Partner** for tool development, funding, delivery, promotion, and evaluation

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What we need to change

Create more diverse tools	Develop tools/content for **affected others**
	Include **diverse perspectives** in tool development (i.e. various disciplines, cultures, and experts)
	Tailor tools to demographics, gambling and banking behaviours, and risk level
	Develop/make tools available **internationally**
Maximize available technology	Increase the use of **reminders, gamification, and incentives**
	Use **direct messaging** to support continued engagement
	Offer **banking tools** with more customization/features
Offer comprehensive & consistent tools	Identify a **standard set of tools** that is consistent across platforms, to support awareness, understanding, and comfort
	Develop a **full player view**, to support holistic and accurate tool support
Build a tool-positive culture in industry & the public	Interact with players and communicate about tools **early in the player experience**
	Actively promote and educate people about digital tools on and off platform, at appropriate times, to support with normalization
	Create a **culture of responsibility** where player wellbeing is an industry priority, supported by regulation and employee training
Build a supportive framework	Include **regulations** that incentivize, provide funding for, and outline data requirements of safer gambling approaches
	Explore ways to support appropriate **data sharing** in the name of improved consumer protection
Evaluate	Focus **independent evaluation** on identifying the most effective tools, what approaches work for who, and impacts on attitudes and behaviours (beyond awareness)

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This report outlines an extensive list of key insights and recommendations. Based on the needs of the field and the themes covered most extensively by stakeholders, the following **three critical next steps** should be the focus of future initiatives to allow for the deepest and broadest impact for people and on the gambling digital tools ecosystem as a whole:

1. To address the imbalance in the digital tools ecosystem and provide resources for the large(r) percentage of people who are not at high risk of gambling-related harms, **more upstream, prevention-focused tools** need to be developed to help those at no, low, or moderate risk stay at those levels or even reduce their risk.

2. To overcome several identified barriers and support increased digital tool awareness, uptake, and engagement, an evidence-based **suite of standard tools** needs to be identified by an independent party and implemented widely across the gambling industry.

3. As a key foundation to a standard set of tools that prominently features prevention tools, and to provide the most effective safety net for people, a widespread **culture of responsibility** over player wellbeing should be fostered across the gambling industry that is embodied in both staff and player initiatives.

Methodology

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Methodology

Literature review: identifying promising practices for digital information & support provision

To provide an understanding of the current landscape and knowledge, RG Plus conducted a literature review of grey and peer-reviewed studies to identify evidence on the digital provision of gambling and other health-related information and support.

The review focused on identifying evidence of promising approaches for information sharing and support that have relevant applications for digital tools in gambling spaces. Specifically, the review looked carefully at research supporting digital information sharing, brief interventions, digitally assisted or implemented treatment, and signposting strategies for gambling as well as other health-related topics. This review sought to identify:

1. | What **type of content** should be provided to players across the spectrum, and

2. | The **best ways to deliver the content**, with a focus on digital delivery.

Documents from 2000 to present were included to cover relevant theoretical contributions as well as evidence supporting the most recent innovations in the digital space. For the purposes of expediting the review process, only online-accessible articles published in English were included. The search process used available online university libraries (e.g., University of Toronto's One Search platform) and advanced keyword search functions. In order to ensure targeted and comprehensive search results, the following structured Boolean keyword searches were used:

- ("digital intervention" OR "online intervention") AND "gambling" AND ("segmented" OR "targeted")
- ("signposting" OR "referral") AND ("digital intervention" OR "online intervention") AND "treatment" AND "gambling"
- "responsible gambling" AND "personalized" AND ("messaging" OR "education" OR "public awareness")

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Search results were reviewed to select articles that included the presentation of empirical findings, theoretical underpinnings for explaining behavioural change, or clear application along the player spectrum. Selected articles were fully reviewed along the following dimensions: topic, jurisdiction(s), study design, findings, applicability along the player spectrum, type of digital tool (information, treatment, etc.), and limitations. In total, **85 articles** were included in the literature review.

The majority of studies in the gambling field on digital tools have focused on problem gambling, followed by at-risk players and responsible gambling. Research on other health-related tools provide several useful insights for consideration in the development and assessment of gambling tools.

Environmental scans: assessing the current landscape of gambling digital tools

To identify promising approaches and areas for improvement, two environmental scans were carried out to locate digital tools that currently exist internationally for the purposes of providing information and support to 1) people along the player spectrum (e.g., new/infrequent, casual, serious/regular, high risk), and 2) those with mental health concerns. The focus of the scan of **digital tools for gambling** was to identify commonalities and gaps in the current landscape of available tools as well as locate tools and stakeholders for inclusion in the subsequent data collection activities outlined below. The focus of the scan of **other (mental) health tools** was to identify promising approaches for application in the gambling space.

Tools were identified by searching online, in app stores, and in the literature. Gambling tools were also found by looking at responsible gambling websites. The inclusion criteria for digital tools was that they 1) are accessible via the Internet, 2) provide some form of information or support to individuals, communities, and/or populations, and 3) are not tools required broadly by regulation (i.e. deposit limits). Tools were reviewed along the following dimensions: jurisdiction(s), year launched, gambling game type/mental health concern, developing organization(s), partnering organization(s), content/features, level along the player continuum/continuum of care relevance, cost, evidence base, intervention type (i.e. Cognitive Behavioural Therapy), format (i.e. app, website), and limitations. In total, **69 digital tools for gambling** and **41 digital tools for (mental) health** were identified and reviewed.

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Rapid tool assessments: taking a closer look at emerging tools

Rapid assessments were performed for two digital tools that have not previously undergone thorough independent evaluation: Gambless and RecoverMe. These rapid assessments were conducted to provide a closer examination of emerging gambling digital tools and their impacts and to identify promising approaches and areas for improvement.

Participation included two components: 1) a **Q&A with tool developer(s)** about the characteristics of their tools, and 2) an **examination of anonymized raw user data** to consider the use and performance of the tool (N=3,203 for Gambless, N=1,171 for RecoverMe). The following were captured in each component:

Developer Q&A	User data
Evidence based foundation (i.e. Cognitive Behavioural Therapy (CBT), mindfulness)	User types (i.e. demographics, harm level, treatment seeking, referral pathway)
Targeting (i.e. Stages of Change)	Feature use
Delivery format	Impacts (i.e. completion, harm/behaviours, mental health, life satisfaction)
Key tool features	User experience
Guided or unguided	Tool advantages
Tool promotion/referral	Tool barriers
Collaboration	
Privacy policies	
Tool advantages (i.e. cost effective, flexible, customizable, confidential)	
Tool barriers (i.e. awareness, engagement, cost)	

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Stakeholder consultations: capturing insights from across the field

To gather information on promising practices, barriers, and opportunities in the field of digital tools for gambling, a series of group discussions and one-on-one interviews were held with stakeholders representing:

• Various **sectors** (i.e. education, treatment, lived experience),

• Different **stakeholder types** (i.e. charities, industry, researchers, tool developers, trade associations), and

• **Jurisdictions** (i.e. Europe, Canada, US, Australia).

Five group discussions and 22 interviews were conducted with **56 stakeholders representing 43 organizations** to gather insights from across the gambling field. Discussions focused on identifying:

• **Successful** tools and success factors,

• **Needs** for digital tools,

• **Opportunities** for targeting, and

• **Barriers** and how to overcome them.

Ethical approval

RG Plus independently designed this study, completed all data collection, performed data analyses, and drafted the current document. This study received ethical approval from the Advarra Institutional Review Board (protocol number Pro00045611, obtained February 10th 2021). Advarra is a private, independent company that specializes in ethics reviews for research involving human subjects in Canada and other countries.

Financial support

Playtech plc, a gambling software company, provided financial support for this independent research project. Playtech is pleased to support this important research and hopes that these insights serve as a starting point for better understanding and exploring the intersection of mental health, safer gambling and digital wellbeing. We also hope that this report provides emerging good practices, insights and case studies that will be helpful as organizations across sectors explore how to collaborate to address a growing and significant social challenge. Playtech is committed to working in partnership to generate new and practical insights to raise standards and forge cross sector partnerships to advance positive digital wellbeing, safer gambling, and mental health outcomes. Thank you all the contributors who provided their time, insights, and perspectives.

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