

#### GAME CHANGER SCENARIOS Copyright © 2014 Atlantic Lottery Corporation.

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#### FOREWORD

Atlantic Lottery (AL) is a government owned corporation established in 1976 to provide lottery and gaming services to the people in the four provinces of Atlantic Canada.

Since 1976, AL has contributed in excess of \$21 billion to the GDP of Atlantic Canada and returned more than \$6 billion in profit back to our communities by providing safe and regulated gaming. Throughout our 37 year history, we have consistently been at the forefront of product and service innovation in the Lottery and Gaming industry. In 1988, AL was the first lottery to use bar code technology to validate tickets. In 1991, AL was the first lottery jurisdiction to successfully integrate the traditional bingo game concept into an instant game. In 1995, AL was the first gaming company in the world to launch a website. In 2000, AL was the first lottery in the world to roll out an Internet Protocol based terminal network. In 2004, AL was the first lottery in North America to sell its products over the internet.

We recognize that past success is no guarantee of future success. The Lottery and Gaming Industry is increasingly complex. The physical world and the virtual world continue to collide and this collision

Since 1976, AL has contributed in excess of \$21 billion to the GDP of Atlantic Canada and returned more than \$6 billion in profit back to our communities by providing safe and regulated gaming. provides both opportunities and risks. New technologies are lowering the barriers to entry. Evolving social attitudes are driving product and prize innovation. New competitors are eroding the previous monopoly models. Sourcing and delivery models are increasingly uncertain.

Our capacity for future thinking has underpinned our history of product, prize and service innovation. As the industry continues to evolve at an exponential rate, we believe it is prudent to consider how the pace and scale of this evolution might ultimately shape the industry, the players and the service providers.

This scenario planning exercise was undertaken as part of the AL strategic planning process. In undertaking this exercise it enables us to more clearly anticipate the future state of the industry (Horizon 3) and align this with our 5-year rolling plan (Horizon 2) and our operating plan (Horizon 1).

By publishing our scenarios, we hope to contribute to a broader dialogue within the industry, which ultimately balances responsible revenue growth with enhanced player protection. "The Lottery and Gaming industry is vibrant, complex and evolving. Our mandate to provide a safe and regulated alternative for the people of Atlantic Canada remains constant. To remain relevant, therefore, it is prudent for a forward thinking company like AL to consider how the industry might evolve. In doing so, we not only fulfill our mandate to our players but we also optimize our capital investments and we continue to provide solid stewardship over a well establish Atlantic Canadian business. This scenario exercise enables us to achieve that."

Bon Sin

Brent Scrimshaw President & CEO, Atlantic Lottery



## INTRODUCTION

Most organizations are absorbed with their day-to-day operations and as a result, spend too little time thinking about the longer-term, defining how it may differ from today and considering what factors may influence it. All too often, therefore, organizations seek new strategies that deal with yesterday's problems rather than those of tomorrow.

Nowadays, change is inevitable, rapid, widespread and far-reaching. Think back just 15 years to a world without Google, Facebook, Amazon and Twitter – a time when Nokia and Microsoft ruled, unaware of the changes to come.

In 2012, the Global Lottery and Gaming industry had an annual value of \$456bn, representing a compound annual growth rate (CAGR) of 5.8% between 2008 and 2012. The Lottery sector was the industry's most lucrative in 2012, with total gross gaming win of \$142bn, equivalent to 31% of the industry's overall value. The performance of the Lottery and Gaming industry is forecast to accelerate, with an anticipated CAGR of 7.0% for the five-year period 2012-2017, which is expected to drive the industry to a value of \$641bn by the end of 2017.<sup>1</sup>

On a macro industry level, the lottery sector is now colliding with the land based gambling sector and both of these sectors are colliding with the eGaming sector, as consumer preferences change in line with technology and lifestyle evolutions.

With increasing levels of connectivity around the world and the pervasiveness of computers, smart phones and tablets, a different generation of players is searching for more enhanced gaming and gambling experiences. In response to this, there has been a significant amount of speculation across the industry on the potential impact of disruptive technologies, innovative delivery platforms, social gaming, digital entertainment, player preferences, technology adoption rates, big data, payment mechanisms and the internet of connected things. Each of these variables (and many others) will affect the nature and content of gaming in all parts of the world. Where will these changes lead? What will happen next in the external environment affecting lottery and gaming?

Planning to meet the challenges of the future has always been an inexact science, simply because the future cannot be predicted. Many may guess "single future" outcomes, at least in the near-term, but it is the unexpected that makes the future so unpredictable. And the unexpected not of a single topic like demographics, but rather, when topics collide as when, demographics meets climate change meets technology innovation meets economic recession meets global competition.

Predicting the future is near impossible; however, thinking about future possibilities can generate awareness to possible changes and their implications much earlier in the change cycle. Scenario planning is not about predicting the future, but being ready for it. The purpose of building scenarios, therefore, is not to get the future right, but to stimulate debate on how to strategically participate in shaping the future, rather than being disintermediated by it.

Recognizing that planning to meet the future is inexact, the question we asked ourselves was:

## What might the Lottery and Gaming industry look like in 2030 and how might a gaming company respond to remain relevant?

A simple question, but the answers result from a deep engagement with complexity.

Everyone participating in the project has been challenged to think differently and deeply about the future in general and about the future of the Lottery and Gaming industry in particular. This Scenario Book presents four alternative future environments that AL may encounter in 2030. It presents the key influences that might shape them, develops narratives about what it might be like to live in them, considers event timelines and early warning indicators.

The scenario development process enabled us to expand the boundaries of our thinking to consider trends and events which, if they happened or if they continued on their current trajectory, could substantially alter the industry and our place within that industry. The Game Changer Scenarios identify previously unforeseen opportunities and threats in our environment.

We recognize that no single scenario will play itself out in its entirety, but rather, that a blend of all four will shape the trajectory of the industry in the years to come.

We believe that with continued scarce resources, changing demographics, emergent middle classes, disruptive technologies and an internet of connected things, the future will be different - very different. We believe that 2030 will bear as much resemblance to 2014 as 2014 does to 1914.

We hope that our scenario book can act as a catalyst to initiate discussion in the industry on how the industry can balance responsible revenue growth with responsible gaming and in the process, continue to provide much needed returns to good causes, public bodies or federal governments. The scenario planning approach used in this study is the Neville Freeman Agency (NFA) Scenario Planning Quest methodology developed principally by Oliver Freeman and Richard Bawden over the last 20 years and the project utilized the Global Business Network/Royal Dutch Shell scenario matrix method to generate the four futures.

We hope you find these scenarios plausible, inspiring and provocative.



Phil Holmes,

Vice President, Strategy and Planning, Atlantic Lottery Corporation

We believe that 2030 will bear as much resemblance to 2014 as 2014 does to 1914.

# SCENARIO MATRIX

**EXTERNAL ENVIRONMENTS** are shaped by a multitude of forces or influences that interact with each other, sometimes in surprising ways, to create the future. Given that the future is uncertain, then we have more than one potential future to deal with. The scenario project team considered many variables, but in the end agreed that the *market dynamics* for the Lottery and Gaming industry on a continuum

from *fragmented* (local) to *unified* (global) and the level of *technology adoption* by players on a continuum from *low* to *high*, were the two key drivers that have the highest impact on the future of the industry and are the least predictable as to the ways in which they might play out. These key scenario elements form the axis for our scenario matrix outlined in figure 1 below.



#### CIRCUMVENTION

This is a world with cultures in collision where there is a tug of war between governments who want to restrict and enforce rules around Lottery and Gaming and a tech-savvy, networked and socially connected citizenry who can easily circumvent those rules. Inconsistency in enforcement defines how people see things work in this world.

#### **IMMERSION**

This is a world of science fiction – a world of intuitive machines, augmented reality, synthetic biology, wearables, sensory implants, genetic augmentation, self-tracking, predictive analytics and fully immersive virtual realities, where real time big data drives a quantum computing based gaming ecosystem, filled with disruptive alliances.

#### INTRUSION

In this world, fear of intrusion and data privacy lead to increasing encryption, slower device performance and ultimately digital simplification where users fail to adopt technology innovations. Social activism is strong and at the extremes, morphs into radicalized opposition that undermines the security and integrity of technology platforms and ultimately, the industry itself.

#### COLLABORATION

In this world, fiscal realities force governments to examine how they work and look at alternatives to becoming more efficient, more competitive and affordable. In this world we see product, association and service collaborations in order to increase operating efficiencies.

Figure 1 – The Atlantic Lottery Scenario Matrix

# INTRUSION SCENARIO STORY

Multiple trends collide to create a world in which digital connectivity, machine intelligence and big data are feared and ultimately rejected by large numbers of people. The triggers for this are complex.

From 2015, the pace of technology innovation increased at an exponential rate. Rapid advances were made in all fields with crosspollination between previously autonomous fields leading to unimagined levels of technological advancement. For some people their rejection of technology was due to the breathless rate of technological change and technological redundancy that left them dazed and confused. Others point to the gradual realization that civil liberties and privacy were being continuously eroded by the adoption and use of technology and for a growing minority of people, it was the adoption of a lifestyle characterized by digital simplification.

What started around 2012 with Wiki-leaks, Edward Snowden and other whistle blowers, evolved over the next decade into a wholesale mistrust of technology, devices and data security. Increasingly, many people started to feel that they had been betrayed, not only by faceless profit seeking corporations who were routinely selling the huge volumes of personal data that was being generated from the technology products, apps and sensors deeply embedded in their customers lives, but also by their governments who were skimming personal and biometric data stored on citizens devices – primarily fingerprint patterns and voice patterns - under the banner of "national security".

The level of technology penetration enabled any company (or individual) with even intermediate technology skills to generate a full profile of a person – who they are, their friends, what they spend, where they go and

how often - as well as being able to directly access their lives through the remote enabling of audio and video technology. People just felt that their lives weren't their own anymore because of the lack of controls over who could access what.

Despite assurances from companies and government agencies on systems and data security, the number of recorded "data ransoming" incidents, (where digital terrorist groups or data pirate extortion groups accessed personal data and demanded a small ransom for **not** manipulating their financial data or data profile in a way that would significantly inconvenience or embarrass the user), were now a daily occurrence.

In the early part of the new millennium, groups who pointed out these possibilities were ridiculed, as were people who complained about the constant government monitoring and surveillance, but now, civil actions and class actions on the grounds of "Privacy Intrusion" and "Technology Addiction" have exploded based upon the numerous studies linking anxiety and low self-esteem to the covert and unlawful extraction of personal data.

On the other side of the technology divide, momentum around the Circular Economy movement grew exponentially. On the other side of the technology divide, momentum around the Circular Economy movement grew exponentially, and as increasing numbers of companies adopted this (or similar philosophies), the demand for devices and components which were 100% recyclable grew. While the pace of innovation continued, the pace of production slowed as manufacturing organizations sourced new materials and manufacturing processes aligned to this new global philosophy.

Increasing numbers started to boast about how old their phones were or how they'd gone on 'Tech-No' holidays with their children to remote parts of the world to digitally-detox and magazines started extolling the virtues of switching off. For many people, simplicity and disconnection were the answer and this prevailing attitude fuelled the trend of disenfranchised technology users pushing the "digital eject" button on their lives.

For those users entranced with the technology innovations (many of which were in the rapidly expanding middle classes of BRIC and N11), the only way to ensure data security was through layers of device and data encryption. On the upside, these solutions were generally effective. But on the downside, the encryption layers significantly impacted the performance of the device – generating performance levels similar to devices from the 1980's.

As public skepticism and disquiet grew, so too did the level of social activism. Emboldened by their ability to leverage the purchasing power of a global network of socially connected mothers (as demonstrated by the success of their campaigns against the confectionery industry, the soft drinks industry and the fast food industry) and enraged by the levels of technological intrusion and technology addiction, the *Mumsnet* pressure group started a "digital temperance" campaign against the technology industry, the gaming industry and the social media industry, with the objectives of removing the possibility of audio and video surveillance through technology devices sold to children, adjusting the neurological triggers in gaming to minimize the possibility of addiction and also to demand a digital amnesty for their children's on-line profiles until after they leave university.

Ever mindful of public opinion, politicians around the world reacted by forming alliances with mothers based pressure groups. With a fearful public, and the rising tide of public opinion, politicians around the world found it easy to pass legislation restricting the use of data collected from

11 <sup>2</sup> Revenue total to demonstrate magnitude, but not yet validated by Atlantic Lottery's Simulation Model

"embedded" technology. In some countries the legislation included a ban on accessing certain forms of digital media and entertainment that were deemed socially undermining or personally addictive. This included games perceived to promote violence, racism or gender stereotyping. In the prevailing mood, many gambling platforms were classified as destructive and were restricted in many countries – and so began the balkanization of the internet. Some forms of on-line media and gaming survive, but player protection was deemed paramount and mandatory player identification systems were widely adopted.

Public and government reactions to big data and the "internet of connected things" are almost exclusively negative due to privacy and piracy concerns. In this environment, the adoption and integration of new technology is significantly slowed and the various forms of legislation had a significant impact on the Lottery and Gaming industry.

For some, however, the impact of the social changes (reminiscent of the social shaming tactics of the anti-smoking movement in the early 2000s) did not go far enough. In a new twist for the industry, anti-gambling groups become more organized and more radicalized and develop the technological expertise to present a serious threat to established gaming companies. What started with disenfranchised individuals attempting crude and irregular Distributed Denial of Service (DDOS) attacks in 2014, evolved into a sophisticated, radicalized network of dedicated hacktivists with a stated objective to undermine the integrity of the Lottery and Gaming industry in revenge for "past crimes". Their objective was eventually realized by 2028 after a number of successful attacks on the random number generator engines and algorithms at the core of on-line gaming platforms, networked video lottery platforms and some ticket lottery draws. The publicity surrounding these events undermined the integrity of the Lottery and Gaming industry in revenge for successful attacks on the random number generator engines and algorithms at the core of on-line gaming platforms, networked video lottery platforms and some ticket lottery draws. The publicity surrounding these events undermined the integrity of the Lottery and Gaming industry in the eyes of the public.

Consequently, the Lottery and Gaming industry shrinks from \$456bn in 2012 to around \$200bn on 2030.<sup>2</sup> In this environment, black market operations grow and utilize "single use devices" for gambling transactions to ensure player anonymity, but jackpots, payouts and liquidity are significantly reduced and this, in turn, further accelerates player decline as consumers transfer their disposable income to other less controversial forms of escapism.

## **INTRUSION** SCENARIO The Journey to this World



## FOR MANY PEOPLE, SIMPLICITY AND DISCONNECTION WERE THE ANSWER

and this prevailing attitude fuelled the trend of disenfranchised technology users pushing the "digital eject" button on their lives.

## **INTRUSION** SCENARIO Early Warning Indicators



#### LEGEND



AS PUBLIC SKEPTICISM AND DISQUIET GREW, SO TOO DID THE LEVEL OF **SOCIAL ACTIVISM.** 

# CIRCUMVENTION SCENARIO STORY



This scenario can best be labelled as "cultures in collision". This world is an uncomfortable place for both regulators and operators. It is not a clearly delineated world and both groups are squeezed between the wishes of governments who want to reduce their dependence on revenue generated from gaming and gambling and the demands of their networked citizenry who continue to rush at hyper-speed to embrace technology, social connectivity and all that goes with it.

This world is, therefore, a compromised and rather messy hybrid of local issues, local rules, local regulations and historical concerns competing with globalized technologies, global connectivity and evolving consumer behaviours.

Although the legislation and regulations surrounding gaming and gambling are well defined in every jurisdiction around the world, the pace of technology adoption continues to drive new innovations that were not conceptualized when the legislation and regulations were drafted. Legislation and regulations, therefore, continually lag behind the technological capabilities, product offerings and player preferences and consumers, even with

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low levels of technical skills, can consistently find ways to circumvent the restrictions which they view as socially irrelevant.

As a result, the generally tech-savvy public exploit what they consider to be "grey areas" to access products or services that are "technically illegal" but widely used. Below the official surface, therefore, there is a vibrant on-line world where people can source almost anything they want in a matter of moments.

Despite the fact that many of the current crop of politicians have come of age in a socially connected world of wearables, data emitting devices, sound bites and selfies, older mindsets still prevail and there is still a strong paternalistic tone set by governments around the world who, (regardless of consistent voter apathy), see themselves as moral custodians, and have dogmatically persisted with a restrictive approach to regulation rather than a player centric approach.

Mandatory player IDs have been introduced by many governments around the world as they seek to find allies in the media and they continually point to vocal minority groups (which have so far failed to turn themselves into anything resembling a coherent social movement) as evidence of support for policies that are disconnected from the industry reality, especially among younger players. Consequently, regulation and enforcement vary enormously from region to region and from election to election.

What the *regulated* world is left with, therefore, are a bunch of rather out-dated gaming products and gaming technologies that are at odds with what people have access to in the unregulated space, which anyone who is even moderately technologically savvy can easily access from their own device – despite attempts to block GeoIPs at a regional level.

Once players had accessed unregulated markets, it was difficult to put these options back into a "regulated only" box. Overall, the challenge

was a bit like getting someone to use a Nokia 411 from the 1990s when they have got used to an iPhone 10.

As the unregulated market commoditized, regulators and operators were caught between an increasingly emboldened digital public on the one hand and determined analogue governments on the other.

In this world, the overall industry value is restrained but grows slowly from \$426bn in 2012 to \$550bn in 2030.<sup>3</sup> The bigger issue, however, is not the slow growth rate, but the more fundamental *redistribution* of revenue from the regulated sector to the unregulated sector.

Revenues, therefore, are consistently lost to unregulated operators as players migrate away from the localized/ paternal models. In the regulated sector, ticket lottery continues its slow decline. The regulated video lottery is growing, especially on-line, but offshore unregulated options offer greater liquidity and more innovative prizing, so is generally seen by players to be far more entertaining and alluring and regulated offerings continue to fall further behind with each passing year. Revenues, therefore, are consistently lost to unregulated operators as players migrate away from the localized/paternal models offering local liquidity implemented by many governments to global gaming products and global liquidity being offered by the unregulated sector.

This, really, was the problem. Once you have the high adoption of technology being driven by players who are a willing part of global market supply, then any local efforts to restrain player behaviour in the local domain are destined to fail unless consistently enforced. A battle, in other words, between one side that wishes to embrace the future and another that seeks to remain in the past.

In this scenario, the circumvention trend that started in the early part of the millennium with Napster, The Pirate Bay and Bittorrent continued to evolve at an exponential rate and pretty soon pay-per-use services were being set up to help consumers get under the wire and over the fence in restricted environments and circumvention became a part of everyday life.



## **CIRCUMVENTION** SCENARIO The Journey to this World





As the unregulated market commoditized, regulators and operators were caught between an increasingly emboldened digital public on the one hand and determined analogue governments on the other.

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## CIRCUMVENTION SCENARIO

## **Early Warning Indicators**



#### LEGEND



## ONCE PLAYERS HAD ACCESSED UNREGULATED MARKETS,

0

IT WAS DIFFICULT TO PUT THESE OPTIONS BACK INTO A **"REGULATED ONLY**" BOX.

# **IMMERSION** SCENARIO STORY

This is the world that science fiction writers have been imagining for years - a world of super-smart intuitive machines, autonomous domestic robots, augmented reality, synthetic biology, haptics, nanotechnology, computer biology, wearables, neurological implants, sensory implants, genetic augmentation, personalized medicine, self-tracking, predictive analytics and fully immersive virtual realities. From a technology perspective, 2030 has little resemblance to anything that anyone in 2014 could imagine.

In this world, embedded technology sensors and the internet of connected things generate huge volumes of personal data on a moment-to-moment basis because almost everything we do, from eating to exercising to driving to learning, now emits data. The sheer volume of data is immense, but this big data can now be processed through quantum computing platforms (which are stable, but very expensive to own and operate) to seamlessly and invisibly rearrange the world around us, making the world more efficient for us to navigate.

The ability to process big data in real time has changed the world. Everything is far more efficient and transparent. Through the application of big data analytics, data generated from personal devices is captured and can be compared to the data exhausts of other people, which has led to one of the biggest spin-offs for the gaming industry – *gamification* - which applies gaming principles and techniques and big data analytics to the data outputs generated from everyday activities such as exercise, eating, healthcare, driving and even personal hygiene to generate points, levels, rewards and discounts.

Indeed, the whole of life has, to a large extent, become a game, much of it highly sensory and immersive. Virtual worlds have become so immersive

in fact, that real life – or "Actual Normality" as it's known - has started to look like "the worst game in the world".

With the continued application of technology innovations to evolve the Gaming, eGaming and Gambling sectors and with the commercialization of gamification, the value of the Gaming industry is now close to 900 bn annually.<sup>4</sup>

Google, Sony, MGM and Ford form a consortium and build a quantum computing based gaming ecosystem to provide players with fully immersive gaming experiences. Attracted by the size of the market, in a disruptive move, Google, Sony, MGM and Ford form a consortium and build a quantum computing based gaming ecosystem to provide players with fully immersive gaming experiences. In this ecosystem, previously separate online platforms and game titles merge to enable players to seamlessly move their avatar from "second life v5" into "Grand Theft Auto v18", into "Call of

Duty v12" then into a virtual casino, then a virtual mall to buy some milk (which is delivered by drone within 30 minutes). Traditional analogue or paper-based products have, along with single player games, more or less disappeared.

The gaming industry is global and consists of a few giant consortiums at the one end and thousands of highly innovative start-ups at the other. Medium sized providers are almost non-existent. While technology has changed immeasurably so have social attitudes and behaviours - especially those around privacy, collaboration and gaming. With gamification now embedded into everyday life and being used to drive socially desirable outcomes, gaming is almost universally seen in a positive light.

Technology adoption is almost universal and most products and services are personalized or customized in some way by the individual user, or by groups of users themselves through crowdsourcing. Moreover, with the exception of a few key items there has been a noticeable shift away from personal ownership to personal access. Few people now own automobiles outright, but prefer to use autonomous vehicles or to access a vehicle when they need one through various P2P car sharing services.

Augmented reality devices are mainstream and mobile devices are now generally worn with an increasing number embedded in the human body. Privacy has declined substantially, but most people agree that the gains far outweigh any losses. Everything, more or less, is now delivered in a digital format, although there is the option to request physical interfaces – but the cost for this type of service make them prohibitive for most people.

Everything, more or less, is now delivered in a digital format, although there is the option to request physical interfaces. Regulation still exists of course, but as the pace of technological innovation continued unabated, governments around the world – who were in large part frustrated by continually outdated legislation – began to develop crowd sourced legislation that enabled the industry to self-regulate. Consequently, responsible gaming has evolved significantly. Most players self-regulate and big data analytics instantly notifies

both the player and the gaming operator if a player's behaviour is cause for concern well before it becomes an issue, which enables early intervention. Satisfied with the consistently low levels of prevalence within the industry, governments are content to exercise control through revokable licensing agreements and point of consumption taxation.

Few people now worry about data extraction or data mining and the early protests groups have evaporated. This situation has been helped, of course, by the fact that the collectors and controllers of data are themselves watched and controlled; such is the new level of transparency. It would be silly to suggest that nothing bad ever happens, but it would be reasonable to suggest that, as a whole, the world is now a much more open and transparent place post privacy.

Governments also have become an enthusiastic supporter of big data due to the time and cost savings and the way in which services can be targeted so precisely.

Governments have long known that the lifetime of social care cost for someone who does not exercise is significantly greater than someone who does. The application of gamification is, therefore, widely applied by governments around the world. Healthcare, for example, is now gamified in many parts of the world with patients being awarded points each time they exercise, eat a healthy meal or maintain a lifestyle change. Their level of achievement enables them move more quickly up a medical waiting list or to receive tax credits or a discount on their personal healthcare premium or the healthcare premium of their employer.

Other industries soon followed suit, and gamification is now widely embedded in the banking industry, the insurance industry, the hospitality industry, the entertainment industry, the travel & tourism industry and the retail industry.

Looking back from 2030 to 2014 the change is almost unbelievable. When people think about the future they generally run a simple neurological program in which current events are projected forward. That might have worked 30 years ago, but in this scenario, the word to focus on is exponentials - 2030 is about as similar to 2014 as 2014 was to 1914.

## **IMMERSION** SCENARIO The Journey to this World



# FROM A TECHNOLOGY PERSPECTIVE, **2030 HAS LITTLE RESEMBLANCE**

TO ANYTHING THAT ANYONE IN 2014 COULD IMAGINE.









#### LEGEND



THE ABILITY TO PROCESS **BIG DATA** IN REAL TIME HAS CHANGED THE WORLD. 10 100 1000 11

# COLLABORATION SCENARIO STORY

In this world, fiscal realities have come home to roost. As debt ceilings are reached by regional, provincial, state and federal governments all over the world, legislation is enacted to ensure the debt ceilings cannot be further extended. Consequently, all layers of government must now live within their means. In preference to enforcing "austerity" measures on the public, social activist movements demand the various layers of government focus attention initially on the "affordability of government" as a means to reduce costs in preference to further taxation. The impact globally is a sweeping evolution of the way government services are delivered and paid for.

All layers of government in most countries accelerate sweeping cost reduction initiatives. As part of the government infrastructure, the regulated Lottery and Gaming entities are seen as low hanging fruit that provide a double benefit of reducing operating costs, but also the possibility of contributing much needed additional revenue.

In response to directives from government, and building on the "big lotto" product collaborations the regulated providers in the industry begin to collaborate on shared infrastructure and shared services – *a collaboration ecosystem* - in order to increase operating efficiencies and maximize economies of scale on a global basis.

In this world, the novelty of eGaming has in large part dissipated. Players still like the thrill of winning but player preferences have changed. The fear of technology, the need for layered encryption and the suspicion of who you are actually playing against (and what they can access from your device during a play session) has led many players to shift A collaboration ecosystem increases operating efficiencies and maximizes economies of scale on a global basis. from "competing against others" to "competing against themselves". Players are still playing games to kill time or to provide a distraction from their life, but there has been a shift from quick win games to longer duration, more engaging "puzzle" games.

The collaboration between jurisdictions has enabled lottery, gaming and gambling products to evolve. The

recognized phenomenon of "jackpot chasing" has morphed from the pursuit of national jackpots to the pursuit of international jackpots and global jackpots. Prizes, too, have evolved. Cash is still the big one, but there are now a wide variety of derivative prizes based on the exchange of points and the exchange of virtual goods.

Social activism is still strong, but less potent than in the *intrusion* scenario. Regulation and the legal framework are much more enabling and allow the lotteries to compete directly with each other and with other competitors (the offshore, unregulated providers have for the most part, moved to a licensed model to enable point of consumption tax to be gathered by jurisdictions), however, black market operators are still thriving and maintain a strong customer base through product and prize innovation.

The upshot is that gaming survives in a form that would be immediately recognizable to anyone visiting from the year 2014. Many of the more

popular games do not attempt to harvest users data, (games that do are generally rejected by players).

In lottery, jackpot fatigue with smaller jackpots has fuelled the trend for much larger international or global jackpots and as a result of collaboration, players can now chase the biggest cash prizes regardless of location. Regional draw games still exist, but these are mainly earmarked for "good causes" or "charity".

In any event, global liquidity, global linked and global progressive jackpots are driving significant growth. Prizes such as cars, houses and boats have been replaced by grander prizes such as a vineyard in the South of France or an estate in Tuscany and these innovations continue to drive growth in the industry which now has a value of \$600bn annually.<sup>5</sup>

This world, therefore, is driven by exponential collaboration between jurisdictions to minimize cost, maximize operating efficiencies and realize economies of scale through "back end" systems integration, as these same jurisdictions seek to provide differentiated products to players who are primarily utilizing "lower tech" devices.

The novelty of eGaming has in large part **dissipated**. Looking back, the joint meeting of the G20 and the World Economic Forum in Davos in 2016 was a definite turning point. The sober realization that rampant economic consumption was not sustainable - from both an economic perspective and from a raw materials perspective - galvanized an agreement to legislate the debt ceiling for each country.

In the Lottery and Gaming industry, to meet the agreed aggressive targets set by governments, jurisdictions and operating companies committed to collaborating on the design and delivery of services based on efficiency, economies of scale and big data. The collaboration ecosystem began through jurisdictions jointly tendering for systems and infrastructure replacement as it became due, with the end objective of every jurisdiction or regulated operator in the world having the option to operate from a single global lottery and gaming platform.

Starting with jurisdictions in Europe joining forces with jurisdictions in the some parts of the USA and Canada, regulated providers who had steadily seen their player bases eroded through a combination of offshore/unregulated competitors and unfavourable/inflexible regulations began to realize significant cost reductions and operating efficiencies by acting together, rather than individually.

Over the years, the collaboration ecosystem was continually refined. Economies of scale were realized and new members joined the alliance as vendor contracts expired or infrastructure required renewal.

The service payment model was designed to be configurable – for some, revenue sharing or "pay as you use" are the preferred options, for others payment reciprocity or commission exchanges are preferred.

There is still a polarization of player preferences. For the minority, high tech is the only way. The growing middle classes in BRIC and N11 are happy to trade data privacy for entertainment options with data encryption generally seen as an expensive and unnecessary add-on. Players in more mature markets – still suspicious of high tech devices and frustrated with the performance of heavily encrypted devices - are continually opting for lower tech devices.

Overall, however, the backend delivery is immaterial to players – all they know is that great gaming options are available whenever they want and on any device they want.

What started as a "perfect storm" – fiscal necessity, operational inefficiencies, increased competition and infrastructure replacement – resulted in a highly effective alliance for global service provision.

## **COLLABORATION** SCENARIO The Journey to this World



## PLAYERS STILL LIKE THE THRILL OF WINNING

but player preferences have changed.

## COLLABORATION SCENARIO

## **Early Warning Indicators**



#### LEGEND



WHAT STARTED AS A "PERFECT STORM" – fiscal necessity, operational inefficiencies, increased competition and infrastructure replacement – resulted in a highly effective alliance for GLOBAL SERVICE PROVISION.

## **COMPARISON** of Early Warning Indicators





## HIGH LEVEL **STRATEGIC IMPLICATIONS** by Scenario



Atlantic Lottery assessed the high level strategic implications of each of the scenario worlds using the twelve (12) streams of its Transformation Model<sup>®</sup>.

AL TRANSFORMATION MODEL STREAMS INTRUSION		INTRUSION	CIRCUMVENTION	IMMERSION	COLLABORATION
	Governance	Regional/fragmented     Local vision / local market     Fear based permission space	Regional/fragmented     Local vision / Global market     Control based permission space	<ul> <li>Unified/global</li> <li>Global vision / Global market</li> <li>Open based permission space</li> </ul>	<ul> <li>Unified/global</li> <li>Global vision / Global market</li> <li>Share based permission space</li> </ul>
	Products	<ul> <li>Low tech / Simple / Analogue</li> <li>Physical not virtual products</li> <li>Retail not on-line channel</li> <li>Smaller prizes / micro prizing</li> <li>Limited product innovation</li> <li>Generic products</li> </ul>	<ul> <li>Low tech &amp; High tech products</li> <li>Physical &amp; Virtual products</li> <li>Both Traditional &amp; on-line products</li> <li>Slower product innovation</li> </ul>	<ul> <li>High tech / fully immersive</li> <li>Virtual and Physical Immersive procession</li> <li>Significant derivative products and product innovation</li> <li>Global / local &amp; micro option</li> <li>Highly Customized</li> </ul>	Blend of Lower tech & higher tech     Lower level of virtual immersion     Global jackpots /     International Jackpots
	Technology	Lower technology expectations     Simpler devices / delivery platforms     Technology delivery costs are critical	<ul> <li>High technology duplication</li> <li>Regulated v unregulated delivery platforms</li> </ul>	<ul> <li>Technology gaming ecosystem</li> <li>High volume, real time, big data</li> <li>Quantum computing platforms</li> </ul>	<ul> <li>High back-end integration</li> <li>Technology sharing / hosting</li> <li>Joint contracts</li> </ul>
	Players	Reducing volume     Fear based - data privacy /     data security	<ul> <li>Similar volume</li> <li>Player migration to unregulated</li> <li>Players circumvent the rules</li> </ul>	<ul> <li>Significant increase in volume</li> <li>Fully immersive - virtual</li> <li>Fully immersive physical – gamifica</li> <li>Channel / platform agnostic</li> </ul>	Player preference for traditional portfolio of games (ticket/VLT) Global jackpot chasers Channel / platform agnostic
	People & Processes	<ul> <li>Traditional gaming operations skills required</li> <li>Traditional gaming operations processes required</li> </ul>	<ul> <li>Both traditional and commercial gaming operations skills required</li> <li>Both traditional and commercial gaming operations processes required</li> </ul>	<ul> <li>Completely new skills and processe required to understand the gaming operating environment and compet in a global commercial market</li> </ul>	<ul> <li>Strong traditional gaming operations and technology skills required</li> <li>(e.g. IT architecture)</li> <li>Strong vendor management and contract management skills required</li> </ul>
	Partners & Suppliers	Low number of supplier partnerships     Low number of vendors and contracts	Medium number of vendors     and contracts	Disruptive partnerships     High number of vendors and contra	Collaboration ecosystem     cts
	Business Results	<ul> <li>Decrease in overall market size</li> <li>Lower volumes and lower margin products</li> </ul>	Increase in overall market size     Redistribution of revenue from regulated     operators to unregulated operators	<ul> <li>Exponential increase in market size</li> <li>Increased revenue from fully immer virtual gaming and exponential increase in revenue from gamificati</li> <li>Zero sum game?</li> </ul>	<ul> <li>Increase in market size</li> <li>Efficiency gains from shared services and infrastructure</li> <li>Reciprocity payments / global commissions / POC taxes</li> </ul>
	Legislation & Regulation	Restrictive and enforced     Supported by players	<ul> <li>Inconsistent regulations and enforcement</li> </ul>	Enabling regulations     Industry self-regulation	Enabling regulations     New global regulations required
	Markets & Geographies	Limited M&A	Dynamic M&A in unregulated markets	Exponential innovation M&A	Service driven M&A
	Competition	Limited and local	Unregulated operators	Highly Competitive	Service based competition
	Structure	Traditional operating Model	Partnership operating Model	Core Only operating model	Extended Core operating model
-	Social License	Data protection     High Social Activism     Limited permission space	<ul> <li>Vocal minority</li> <li>Two sides – public perception v legislation</li> </ul>	Unlimited permission space	<ul> <li>Global causes and Earmarking</li> <li>Global social license balanced with local requirements</li> </ul>

## CONCLUSION

It is evident, as we learned going through this exercise, that many organizations do not spend enough time thinking about the longerterm future of their organization and often implement strategies that address yesterday's problems rather than those of tomorrow. The Lottery and Gaming industry is seeing physical and virtual worlds colliding, technology exponentially evolving and consumer preferences changing.

We have created four alternative futures which challenge the industry with regard to our framing question:

## What might the Lottery and Gaming industry look like in 2030 and how might a gaming company respond to remain relevant?

So what are the strategic implications of these futures? Are these implications 'universal' or specific to one environment? How might your organization respond to these worlds and what strategies might you have to put in place?

To make this happen, we need to imagine it is the year 2030 and identify those strategies that would align the gaming industry with the defining characteristics of each imagined world.

The four scenario worlds suggest that future changes to society will produce environments at least incrementally different from today, but each of the four worlds also contains elements that are potentially disruptive.

We recognize that no single scenario will play itself out in its entirety, but rather, that a blend of all four will shape the trajectory of the industry in the years to come.

Lessons from the scenario worlds indicate that government policymakers for the gaming industry, strategy creators in the industry itself and pressure groups in the community at large, all need to take into account the longer-term implications of their actions - or their inaction. Aligning gaming supply with player demand and perceived social value looks like the dominant strategic challenge for the Lottery and Gaming industry leading up to 2030.



#### **GLOSSARY OF TERMS**

BRIC	Acronym that refers to Brazil, Russia, India, and China
Gamification	Use of game thinking and game mechanics in non-game contexts to engage users in solving problems and/or adjust behaviours.
General Online Spend	Refers to all spend online
GEOIP	The identification of the real-world geographic location of an object, such as a radar, mobile phone or an Internet-connected computer terminal based on Internet Protocal (IP) address.
Industry Spend	The total spend in the regulated Lottery and Gaming market.
Mumsnet	United Kingdom's biggest network for parents to swap advice about all things parenting.
N11	Refers to the next 11 countries – Bangladesh, Egypt, Indonesia, Iran, Mexico, Nigeria, Pakistan, the Philippines, Turkey, South Korea, and Vietnam – as having a high potential of becoming the world's largest economies
P2P	Peer-to-peer
Regulated Market	In this context refers to instances in which the activity of Lottery and Gaming has been specifically permitted by law.
Unregulated Market (Gray Areas/Gray Market)	In this context refers to instances in which the activity of Lottery and Gaming has not been permitted by law.

#### **ABOUT** ATLANTIC LOTTERY

Since 1976, Atlantic Lottery has contributed in excess of \$21 billion to the GDP of Atlantic Canada and returned more than \$6 billion in profit back to our communities. Every day Atlantic Lottery's employees demonstrate our shared commitment to social responsibility, operational integrity and to making a difference across Atlantic Canada. While job titles may vary, what is constant is the focus on helping to fulfill government's mandate of player protection within a regulated environment. Together, we are ensuring that a steadfast commitment to the sustainable, long-term growth of Atlantic Lottery never compromises our commitment to strong governance principles.

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#### **ABOUT** THE NEVILLE FREEMAN AGENCY

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Oliver Freeman is managing director of Australia's leading boutique scenario planning consultancy, The Neville Freeman Agency, formerly GBN Australia, which he co-founded with Richard Neville in 2002. In 2003 he was appointed Adjunct Professor in the Faculty of Business at the University of Technology in Sydney and re-appointed in 2010. In 2009 he was appointed a business partner of the Creative Industries Innovation Centre.

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