BUILDING BRIDGES

Gaming and Technology are reshaping the Gambling industry's new Digital Business

GAMING STANDARDS
ASSOCIATION

PLATINUM MEMBERS

OVERVIEW

- **GSA in a nutshell**
- **Global Gambling Business**
- **Forces Reshaping the Gambling Industry**
- **Some Key Technologies**
- **Impact on Policy domain**
- **Europe and the GSA RRI effort**
- **Question of Trust**

GAMING STANDARD ASSOCIATION (GSA)

FOUNDING

- May 1998: GSA Incorporated in Fremont, CA as non-profit
- July 2010: GSA Asia Ltd. was incorporated in Macau, SAR
- March 2017: GSA Europe incorporated in Malta as an Association

MISSION

- The Gaming Standards Association (GSA) is an international trade association, representing global companies, creating benefits for gaming suppliers, operators and regulators. We facilitate the identification, definition, development, promotion, and implementation of open standards to enable innovation, education, and communication for the benefit of the entire industry.

MEMBERSHIP

- 61 members: 8 Platinum, 5 Gold, 19 Silver, 19 Bronze, 10 Affiliate/Advisory
- HQ: 35% Europe, 32% US, 8% Canada, 25% Asia

Mot then 1600 volunteers from over 190 companies contributed their expertise to create the various GSA standards. Companies that supply 70% of the global gaming marketplace are or have been involved in GSA.

GSA STANDARDS

- **GSA operates 9 committees creating 15 standards**

- **GDS – Gaming Device Standards**
  - Protocols used by Electronic Gaming Machines (EGMs) to communicate with peripheral devices.
    - Note acceptors, hoppers, printers, card readers, etc.

- **G2S – Game-to-System**
  - Protocols used to communicate between EGMs and systems.
    - Meters, events, ticket-in-ticket-out, progressives, bonuses, etc.

- **S2S – System-to-System**
  - Protocols used to communicate amongst gaming and non-gaming systems.
    - Player registration, table games, G2S support, etc.

GSA STANDARDS

- **GAT – Game Authentication**
  - Protocols used to authenticate software on systems, EGMs, and peripheral devices.

  New

- **TPI – Third-Party Game Interface**
  - Communications between remote game servers and online gaming platforms.

  New

- **RRI – Regulatory Reporting Interface**
  - Communications from online gaming platforms, remote game servers, and jackpot servers to central monitoring systems.

GLOBAL GAMBLING MARKET EST. $635B BY 2022

GLOBAL MARKET SIZE

- **Total Gambling industry revenue $635 Billion in 2022**
  - Casino gaming (slots, table games), Sports, Lotteries, Mobile, Online gaming
  - Global Online Gaming Market will double in size to $97B in 2024

- **Total Gaming industry revenue $128 Billion in 2020**
  - Grew from 100 million gamers in 1996 to 2.6 billion gamers in 2017
  - 665 million people are watching Gaming Video Content (GVC) vs. 325 million people that are watching HBO, Netflix, ESPN and Hulu combined
  - eSports will generate $700 million in 2017 and $1,49 billion in 2020

- **We see an erosion of the Casino industry revenues in the US**
  - The gaming experience in Casinos is boring
  - Operators are trying to work out how to keep the business relevant to future generations
  - Macau different from Las Vegas (Revenue 5% slots vs 64% slots)

FORCES RE-SHAPING THE GAMBLING INDUSTRY

THE GAMING INDUSTRY AND ITS TECHNOLOGY ARE RESHAPING THE GAMBLING INDUSTRY'S NEW DIGITAL BUSINESS

- **Millennials**
  - Grew up playing video and mobile games
  - Tech savvy and interested in different type of games with on sensory input
  - Strategy based games backed by AI systems that understand their preferences.

- **Technology**
  - Smartphones and Consoles make current casinos slot games look boring
  - VR and AR offers incredible opportunities for creating a totally new immersing experience allowing for virtual interaction within the walls of any casino property (Apple AR iOS)

- **Social Interaction**
  - Online players are being deprived from the social part of the gaming experience that Casinos provide. How important is that for them?

5 LIFE SKILLS THAT GAMES CAN HELP DEVELOP

- **Patience and Perseverance**
  - Repetitive activity will help you prepare for the daily grind
  - The ability to endure routine and repetition will help you achieve objectives
- **Forward thinking and Strategic Planning**
- **Leadership and Socialization**
  - Enables stereotypical a-social gamers to actually improve social skills
  - Socialization can lead to leadership
- **Mental and Creative Skills**
  - Improve brain functionality
    - Mental math, speed reading, concentration
    - Hand-eye coordination, peripheral vision, sharpness of vision
- **Sympathy and Empathy**
  - Instead of the emotionally numbing and brain rotting games, new games are emotionally weighty games

SOME KEY TECHNOLOGIES

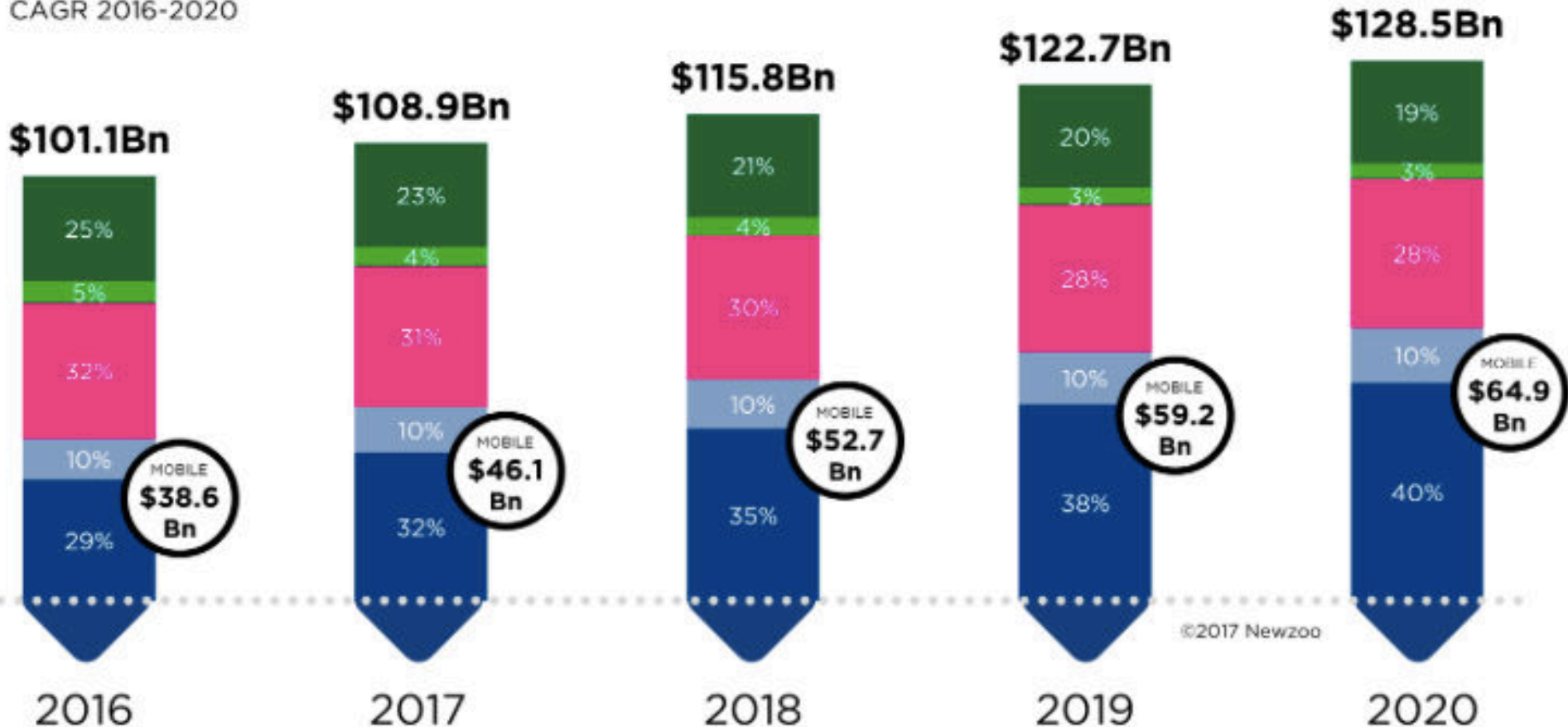# FORCES RE-SHAPING THE GAMBLING INDUSTRY

MOBILE GAMING MARKET GROWTH

TOTAL MARKET
+6.2%
CAGR 2016-2020

Legend: ● Boxed/Downloaded PC ● Browser PC ● Console ● Tablet ● Smartphone

$101.1Bn (2016)
- 25%
- 5%
- 32%
- 10%
- 29%
- MOBILE $38.6 Bn

$108.9Bn (2017)
- 23%
- 4%
- 31%
- 10%
- 32%
- MOBILE $46.1 Bn

$115.8Bn (2018)
- 21%
- 4%
- 30%
- 10%
- 35%
- MOBILE $52.7 Bn

$122.7Bn (2019)
- 20%
- 3%
- 28%
- 10%
- 38%
- MOBILE $59.2 Bn

$128.5Bn (2020)
- 19%
- 3%
- 28%
- 10%
- 40%
- MOBILE $64.9 Bn

©2017 Newzoo

2016   2017   2018   2019   2020

MOBILE GAMING MARKET

- **The massive growth of smart phones and tablets is one of the most important technology innovations in the online gaming industry**
  - By the middle of 2017 there will be 5 Billion mobile subscribers
  - By the end of 2020 there will be 6.1 Billion smartphones users

- **Dec 2012: 28 year Londoner won $530,584 at William Hill property playing a game on his phone!**

Source: Casino City Press

SMART TECHNOLOGIES

- **Smart Technologies encompasses the technologies that form part of the new economies.**

- **New economy is pushing the use of smart homes, smart grid, smart cities, crypto currencies & BlockChain (distributed ledges technologies)**

- **It is referred to as the Internet of Things**

INTERNET OF THINGS

- **Machine - to - Machine communication based on MQTT protocol and a loosely based on Subscribe & Publish**

- **In the future – standards & protocols will play a critical role in shaping Smart Technologies**

Source: Mario Morales, IDC
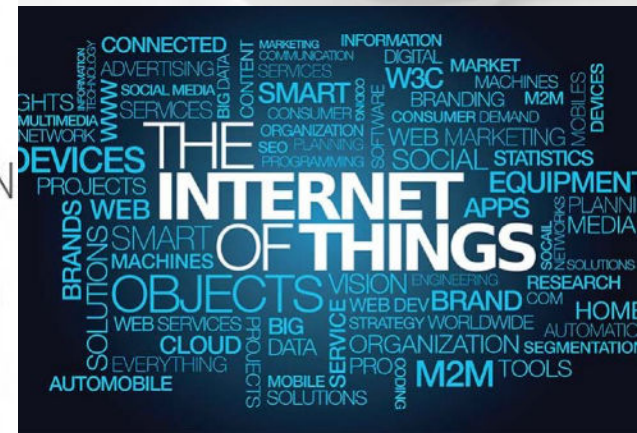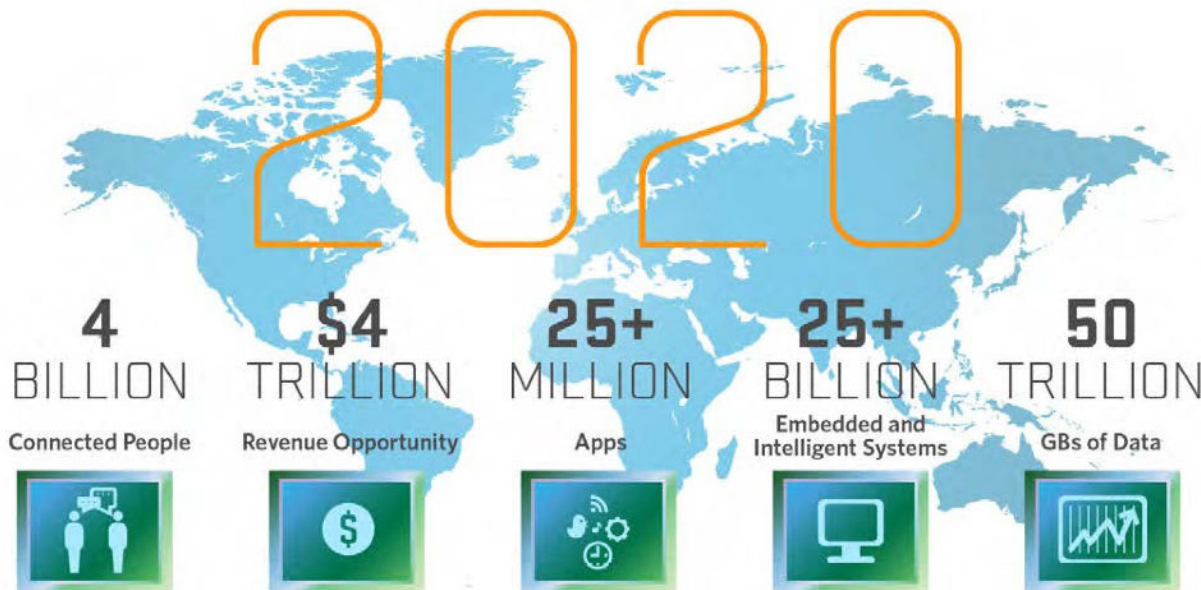
THE FUTURE CASINO TECHNOLOGY STACK
(Online or Offline)

USER APPLICATION (Augmenting the gaming experience)

BACK END APPLICATIONS

BIG-DATA ANALITICS

STORAGE (Distributed / Centralized)

CLOUD (Public / Private)

IOT INTERFACE

TERMINAL (Casino / Player)

EXTENDING THE GAMING FLOOR USING NEW TECHNOLOGIES

By combining traditional casino games with new technologies we can produce new forms of games that are more appealing to the new generation of players.

For example, using Augmented Reality applications we can map statistical data on a roulette table or black jack table. In this way a player has more information on the outcomes of that particular table and feels empowered.

Another example is to have side betting on mobile during a live roulette table or black jack table game.

EXAMPLE

Application

Big Data Analytics

Bet Offer

Personalization / profiling

EVOLUTION OF CASINOS

- Casinos have existed for many years but they were always considered as a bad element in society because of the criminality that was associated with the industry.

- The regulation of the casino industry changed the perception of the casinos. Now they are perceived as a form of entertainment.

- Players are more educated on the risks involved and on the other hand they can rely on the fairness and accountability that I provided by the regulator.

PARTICIPANTS IN GAMING
STAKEHOLDER DOMAINS
BALANCING THE FORCES

REGULATOR

Governments, Policy Makers, Regulators, Law Enforcement, Legal systems

Policy Makers Domain

Controls the gaming market by setting the parameters on legal rights through licensing, performs Integrity checks, establishes standards and procedures, carry our continuous monitoring and

Demands share of control, Self regulation

Expects to be protected as player and consumer.

Sets proper behavior - Awareness, Educational Campaigns, Public funding of NGO & Agencies

OPERATOR

PLAYER

Industry Domain

Demands higher economic benefits

Operators, Test Labs, Suppliers, Trade Organizations, Supporting Industry, Unions, Lobby groups

Increases product awareness and facilitates accessibility

Consumer Domain

REGULATING LAND BASED GAMING

REGULATOR

Full Control of
POINT OF
PRODUCTION

Full Control of
POINT OF
CONSUMPTION

Same political
jurisdiction

THE LOCATION OF THE
WAGER IS WHERE IT IS
- OFFERED,
- ACCEPTED, &
- RECORDED

OPERATOR

GAME

PLAYER

Gaming Establishment

Online Gaming Regulatory Model

REGULATOR

The Network

OPERATOR

Gaming Server

Point of Real Economic Benefit

Manages the Gaming Services Remotely

Point of Production

Plays Remotely

PLAYER

Point of Consumption
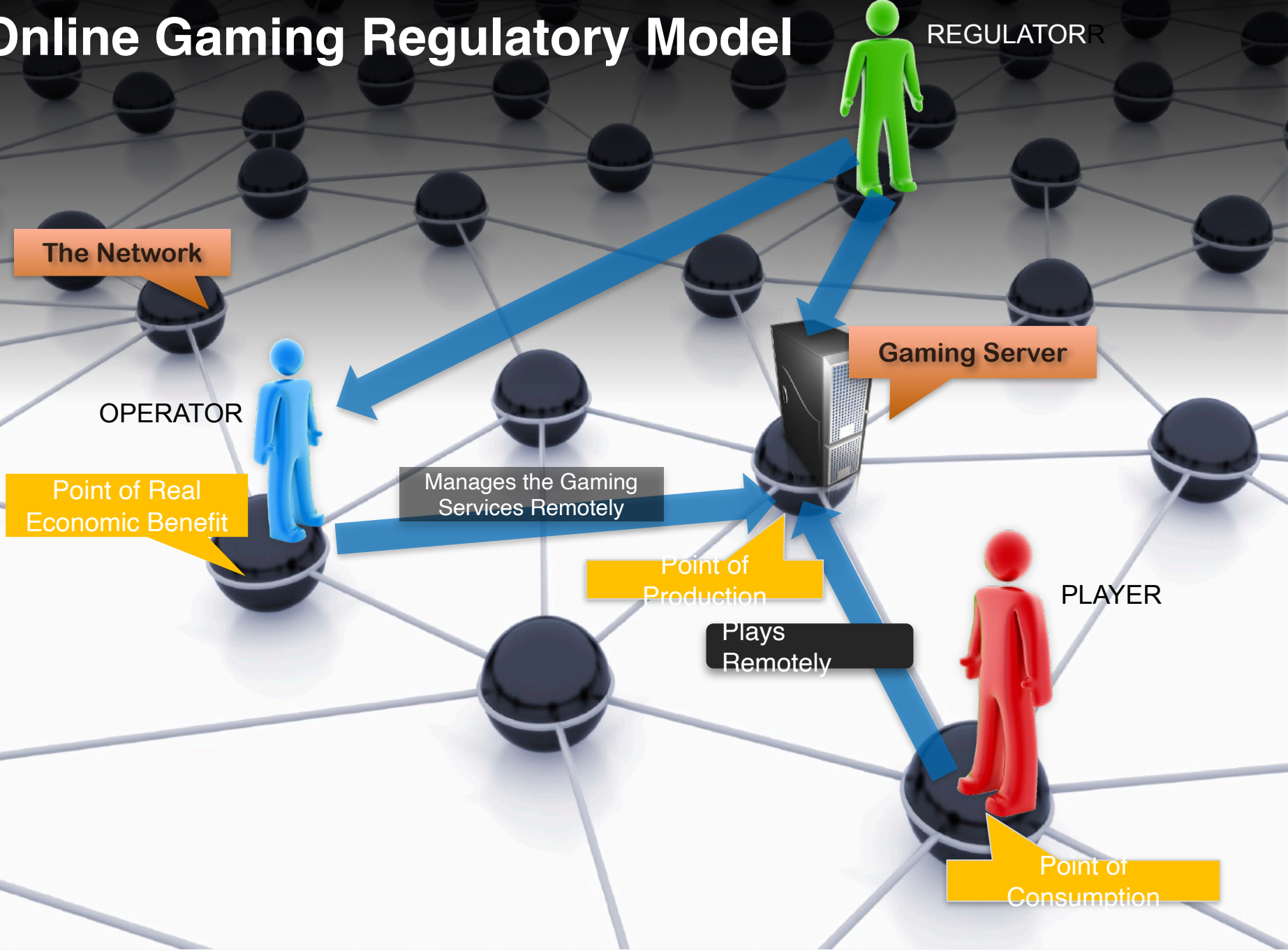
IMPACT ON POLICY DOMAIN

IMPACT ON THE GAMING INDUSTRY

- **Blurring the lines between Land-based and Internet gaming technology!**

- **Gaming is moving to a personal device anywhere anytime**
  - EGM's always online, contain tablets or cell phones and using personal online wallets

- **Gaming is shifting from game centric to system centric to player centric**

IMPACT OF TECHNOLOGY CHANGE FOR REGULATORS

- **Regulators are challenged with crafting regulations on how to supervise and control this borderless and faceless new indust**

- **Regulators have to adapt from chasing a paper trail to active real-time monitoring**
    - Lack of standards forces custom interfaces for every system licensed
- **Rapidly fading technology distinction between land based and online**
    - No longer land-based & internet gaming but online gaming
    - Multiple personal electronic wallets – Paypal, ApplePay…

- **Playing a Catch-up game – chasing the internet**

STANDARDS HELP CREDIT CARD COMPANIES NOTICE IRREGULARITIES FIRST

Free Text Msg: *Citi Cards Fraud Dept. Did you attempt a charge at Airmalta in the amount of $106.14 on 05-14? Yes, reply 1, No, reply 2. You may also call 8003866624 and enter pin 5642938. To Opt-Out reply STOP.*

Free Msg: Citi: *Your account has your travel plans noted from: 2014-10-11 00:0 - 2014-10-14 00:0 . If you did not request this contact us. Send STOP to Opt Out.*

CC Companies Knows More About You Then Anyone Else!

REGULATORY REPORTING INTERFACE (RRI)

- **CEN TC456 – Regulatory Reporting Standard**

- **RRI is designed to provide gaming regulators with the information that they need to efficiently and economically monitor online gaming activities.**

  - Balance Player Accounts
  - Calculate Taxable Revenues
  - Verify Game Performance
  - Balance Progressive Jackpots

- **RRI can also be used to monitor some land-based gaming activities.**

BENEFITS OF RRI

- **For suppliers,**
  - Provides a single reporting model that can be used across multiple jurisdictions.
  - Reduces the barriers to entry in new markets.

- **For regulators,**
  - Minimizes the need to develop jurisdiction-specific requirements.
  - Creates opportunities for off-the-shelf reporting solutions.
  - Facilitates sharing of information across jurisdictions.

- **For operators,**
  - Lowers acquisition costs and on-going compliance costs.
  - Reduces the time-to-market for new products.

RRI: REAL-TIME REPORTS

- **In real-time, critical transactions are reported to the monitoring system for approval.**

  - **Player Registrations**
    - Name, address, identification, exclusions, etc.

  - **External Player Account Activity**
    - Deposits, withdrawals, adjustments, etc.

  - **Game Play**
    - Wagers, wins, and commissions.
    - Jackpot contributions and jackpot wins.

  - **External Progressive Activity**
    - Jackpot resets, adjustments, etc.

Reported <u>before</u> the action is completed.

RRI: WHAT CAN IT BE USED FOR?

- **AUDIT**

  - **Game Results**
    - Verify that reported game results match actual observed game results.

  - **Player Registrations**
    - Verify that player registration information meets jurisdictional requirements.

  - **External Account Movements**
    - Verify that reported external movements in player accounts match information from external sources, e.g. payment processors.

- **RECONCILIATION**

  - **Summaries**
    - Verify that the total of all Game Results, External Account Movements, and External Jackpot Movements reported in near-real-time for the day agree with the periodic Summaries.

  - **Ending Balances**
    - Verify that the ending balances for player accounts and jackpots agree with the beginning balances.

RRI: WHAT CAN IT BE USED FOR?

- **REPORTING**

  - Gross Gaming Revenues

  - Taxable Gaming Revenues

  - Game Performance

  - Funds-In-Play

  - Player Profitability

  - Player Liability

  - Jackpot Liability

RRI: REGULATOR BENEFITS

- Improves the **quality, accuracy and reliability** of information as it enters, processed and then reported to regulators.

- Enhances the **breath and depth** of information that can be included in analyses and reports on a routine basis with minimum to no added costs.

- Helps you to **pull time and costs out** of the reporting process.

- Allows **sharing** of information amongst regulators on a global level.

- Enables the developed of tools to **detect fraudulent activities in real-time**, across multiple states or countries thereby significantly supporting the principles of gaming policies.

STANDARDS WILL HELP TO ACCURATLY COMPILE, REVIEW AND AUDIT & PROVIDE CONSUMER PROTECTION

THE QUESTION OF TRUST

- **Online trusting someone is far more difficult than in the real world.**

- **In gaming the trust factors are:**

  - ➢ "Money Protection" Can I trust the operator with my money or will he run away with it?

  - ➢ "Game Fairness" Are the games offered to me fair & transparent?

  - ➢ "Accountability" Am I playing with a clean operator – how do I know that I am not part of a criminal operation?

BLOCKCHAIN
The Future Trust Factor For Online Gaming

- BlockChain is being heralded as the ultimate solution for doing transactions over the internet amongst untrusted peers.

- BlockChain takes away the need of an intermediary that is trusted by all the parties doing a transaction.

- In other words – contracts are "Technically Enforceable" rather then "Legally Enforceable"

- A wager is essentially a contract between the player & operator that is legally enforceable through the regulator

- Using "smart contracts" technology there is no need to legally enforce the wager

- Casino platform built on the **Ethereum Blockchain** offers "provably fair" games for players while completely removing the need for third parties such as regulators and RNG testing services.

THANK YOU