



Emerging Technologies Summit

MAKING THE CONNECTION:
From Energy Efficiency Innovation to Delivery

April 19 – 21, 2017

Why Can't It Be Just Fun and Games? Using Gamification for Engagement and Savings

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Gamification: An Overview

SUSAN MAZUR-STOMMEN, PH.D.

INDICIA CONSULTING



What is a game?

At a minimum:

- There needs to be a minimum of one player
- Gamer *voluntarily* enters into environment
- Games have some kind of self-contained goal
- Games have rules
- Choices are constrained
- Game provides feedback about progress



How do games work?

- Elements of game mechanics like leaderboards, achievements, and leveling up provide motivation for players to continue playing.
 - Leaderboard – players who have the most points or best times
 - Points – measuring progress within a game
 - Quests – specific goals or tasks for users to complete
 - Achievement – reward for completing a certain set of tasks
 - Badges – visual signifiers of a user's rank or status
 - Narrative – users can progress in a story by participating



Gamification 101

- Program designers incorporate game mechanics into everyday activities to add motivation for behavior change.
 - Using game mechanics heightens the experience of real-world activities.
- Gamified systems directly interact with real-world actions, like exercise or environmental actions.
 - They use features of games like points, badges, leaderboards and challenges, and apply them to otherwise boring real-world situations (jogging on a treadmill)



Who plays games? (Hint: EVERYBODY)

- Games are a human cultural universal, one of about eight total
 - (So you know it is important!)
- Anyone who believes that ‘only kids play games’ is missing a huge opportunity to connect with an audience that consists of a majority of U.S. households:
 - 58% of all Americans play video games.
 - The average age of gamer is 30
 - More evenly split by gender than many suppose
 - 55% of all gamers being male, and 45% female.
 - There are actually more female gamers over 18 (31% of the total number of players) than male gamers under 17 (19%).



Survey Says!

- We put out an informal poll asking people about their gaming experiences:
 - From our poll, 63% of our respondents, all adults, had played a game in the previous week.
 - 54% of respondents said they had played a 'video' or 'digital' game in the previous week.
 - In terms of age, 27% of respondents were over 50.
 - Our gender split was 63% female, 36% male, and 1% other, with no teenaged boys.



Why do we play games?

- Part of the appeal of games lies in the combination of different reward types such as:
 - Status
 - Access
 - Power
 - Stuff
- Extrinsic rewards: such as free products (Stuff), can be short-term motivators
- Intrinsic rewards: such as community recognition (Status), are *superior* mechanisms for fostering engagement and loyalty



What kinds of play styles exist? (A lot)

- Bartle (1996) identified four main types of players in online multiplayer games:
 - Achievers: players who work hard to achieve game-related goals
 - Socializers: Players who want to converse and interact with other players
 - Explorers: players who are interested in learning as much as they can about the game world
 - Killers/Griefers: Players who impose themselves on others
- We added a fifth category in our paper, based on poll results:
 - Customizers: Those who like to customize their online avatar or habitat



Arguments against gamification

- These tend to fall into three camps: semantic, functional, and ethical:
 - Some argue term is merely a new label for an older set of business practices
 - Some argue it is all 'hype' and doesn't work
 - More seriously, some argue that corporations and governments trick people into performing activities they would otherwise refuse
 - Game mechanics possess an inherent quality of coercion, and when deployed via institutions with a great deal of power over the individual, people can see gamification as something that is both deceptive and oppressive
 - If Gamified systems are not voluntary, they violate the definition of a 'game' and become work.



Does gamification work?

- Gamified activities have been around about 120 years (Green Stamps)
 - Several gamified systems oriented toward health and fitness, including Fitocracy and Superbetter, demonstrated that games can successfully influence people to change their behavior to improve their health
 - Energy-related game designers seek to do the same thing to promote pro-environmental behavior.
- Empirical evidence suggests that games change behavior
 - In a recent review of “24 peer-reviewed, empirical research papers” on gamification, Hamari, Koivisto, and Sarsa (2014) write that, “According to a majority of the reviewed studies, gamification does produce positive effects and benefits.”



Download our paper

- The data we cited can be found in a paper we have as a free download on our website:
- <http://indiciaconsulting.com/downloads/Games-for-Grownups-Climate-Change-Edition.pdf>



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The Power of Fun, Social, and Easy Games!

Presented by:

Kathy Kuntz, Executive Director at Cool Choices

April 20, 2017



Let's Play for Fabulous Prizes!

- **Break into teams**
- **Review deck of sustainable actions and quickly put into 4 piles**
 - ALL on team did this in last 30 days
 - Some of us did this in the last 30 days; everyone else WILL DO in next 15
 - Some of us have done it, some will do it, but all will NOT do action
 - NOBODY has done this in the last 30 days, and nobody will do in next 15
- **Then teams will report out # of actions in each pile:**
ALL DID ALL DID/WILL DO SOME DID/WILL DO NOBODY DID/WILL DO
- **Teams are competing for fabulous prizes!**

Playing Cool Choices

- **Leverage Workplaces**
 - Form Teams with Peers
 - Practices at Home and Work
- **Simple, Holistic On-line Approach**
 - Points – Not Geek Speak – for Actions Taken
 - Earn Badges, Bragging Rights
- **Transparent – *Sustainable Actions Are Visible***
- **Aggregate Outcomes – *It All Adds Up***



Program Appeals to Different Audiences

- Achievers

Team		Individual	Location	
Players	Points	Actions	Badges	
1st	 Kam Lie	3360	94	
2nd	 Karalyn Falatovich	3355	94	
3rd	 Josh Sowa	3350	94	
3rd	 Cindy Fernbach	3350	94	
3rd	 Sara Geraty	3350	94	
6th	 Patricia Spikes	3320	94	
7th	 Josh Hewes	3260	94	

Program Appeals to Different Audiences

- Achievers
- **Socializers**

 **Peggy Hatfield**
Aug 03, 2016 at 8:16am

Morning, ChICTRs!
Thanks again for participating. Hopefully you have learned something new, reminded yourself of something you already knew, and celebrated all that you are doing to be healthy and respect the environment! Wondering if the team would like to go out for dinner when the game is over?

Uncool

[f Share](#) [T Tweet](#) [in Share](#)

 **Ben Chabot** Dec 02, 2016 at 7:10pm

I removed a box of tire chains. I don't know why I even have tire chains in SC.

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 **Theresa Humanicki**
Nov 13, 2016 at 11:11pm

Use public transportation (CTA)...save time, gas and miss the traffic headaches!



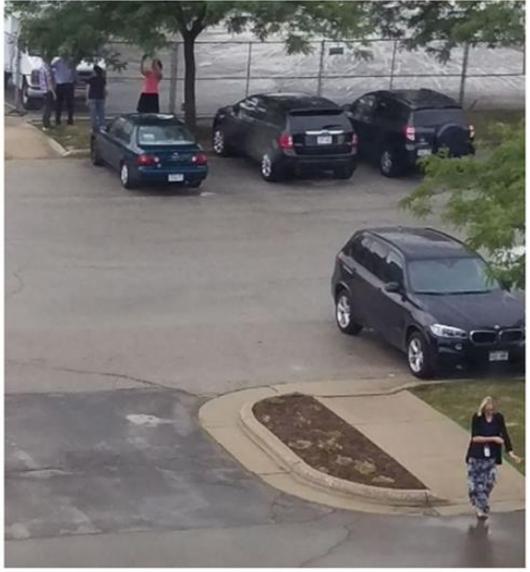
Cool

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 **Kevin Jankowski**
1 day ago

Dear Water Warriors,

I found the secret headquarters of Gang Green... apparently they meet every day around 2pm to coordinate activities. I think they voted their captain off the team today and apparently only four remain. I have video of their handshake so they'll be easy to infiltrate. Looks like the top spot will be up for grabs soon.



Uncool

[f Share](#) [T Tweet](#) [in Share](#)

You, **Micki Klappa-Sullivan**, **Lisa Sasso**, **Susan Coyle**, and 4 others think this is cool.

 **Jay Feiker** 1 day ago
Kevin Jankowski, you are hilarious!

 **Jay Feiker** 1 day ago
Kevin Moore, **Sarah Seifert**, **Cari Roper**, **Heather Crane**, **Susan Coyle**, don't believe this gossip columnists lies. He's only trying to gain an advantage by pitting us against one another.

 **Heather Crane** 1 day ago
it was a decoy!!! fool.

Program Appeals to Different Audiences

- Achievers
- Socializers
- **Explorers**

STEP

Turn off incandescents whenever you leave the room & CFLs if you'll be gone 10 minutes or more.

— MORE INFO —

Turn Off Tips
Seasonal Enviro-Tips

Play

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ENERGY 101



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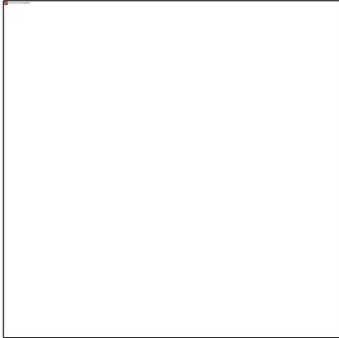
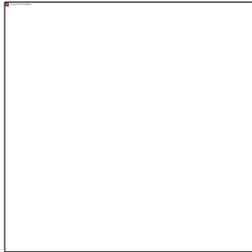
Building Green

MENASHA
FORWARD

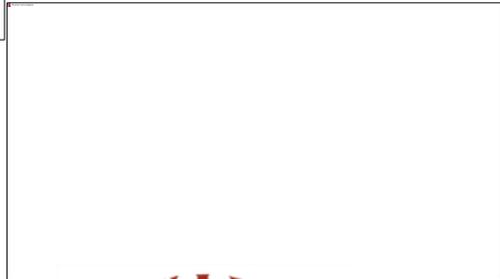
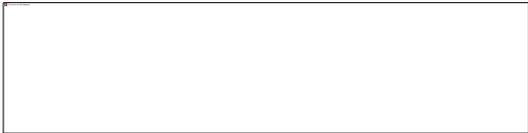


UWHealth

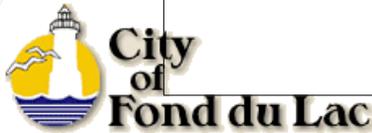
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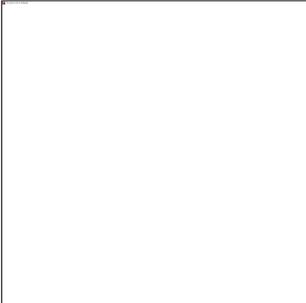
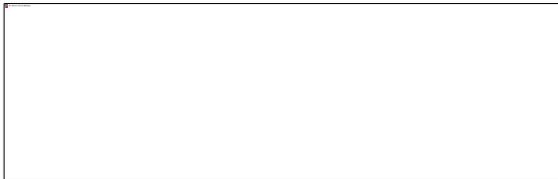


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MMSD
PARTNERS FOR A CLEANER ENVIRONMENT

cool choices



Lessons Learned

- **Rules matter**
 - Unfair/unclear rules → more cheating
 - Achievers remember everything
- **Games should be fun and social**
 - Aim to broaden participation, create buzz
 - Nothing fun about coercion
 - Perpetual pop quizzes are not fun or social

Game Broadens Participation

- Up to 70% in office settings
- Over 40% in manufacturing facilities
- **Offering points works!**
 - Collecting household-specific information (“count the number of...”)
 - Nudging households to specific utility/municipal programs/services
 - Identifying facility-level opportunities

We've scheduled a home audit to find even more ways to save energy (and money).

Verified Savings + Participant-Level Data

- Median household electric **savings of 6%**
- Facility-level impacts too
 - Immediate drop in electric usage
 - Milwaukee Fire Department **saved 6.6%**
 - Hundreds of employee ideas for deeper savings
- Game data: What participants did on a daily basis
 - Insights into specific behaviors
 - Granular persistence estimates

Real Participants Report Positive Outcomes

My family has not only saved money, but we actually feel better after spending more time outdoors and making healthy choices.

...the most meaningful component was knowing that almost 1,000 other people chose to do this. That sense of community felt great.

I feel like I'm a better person!

Cool Choices has us out of the house and walking more!



Increased Buzz Around Sustainability

We've talked my parents into using their Energy Star dishwasher as opposed to hand-washing their dishes too.

We tease each other around the house: "Dude...that's not a 'cool choice'!"

Cool Choices has encouraged family discussions of energy and water use in our home.

My kids have been telling me when they shut off lights

The choices engaged my students in great conversations, and we were able to make some changes in our classroom.

In a meeting everyone was bragging about the choices they made, points received, or who was leading. It was fun!

Participants Feel Empowered

Cool Choices has made our entire family more aware of how our actions and way of living can be part of the solution, and not always the part of the problem.

I have a real sense of satisfaction now every time I flip an LED switch and when I don't hear the hum of my electronics on stand-by.

Cool Choices has made me think about things, outside the normal recycle type choices...I never would have thought about power settings on my computer or that my cable box could be an energy saver.

I pause and think twice about whether I'm contributing to the overall sustainability in whatever I do.



Games Work!

It was almost like a game was integrated into my daily life. I would be taking the stairs some days and say, "Oh yeah, cool choice, 10 points. It's silly, but it made something not so fun, as taking the stairs, into something more fun.

I feel that prior to the game, I was aware of ways I could save energy...however when you are playing something every day that gives you ideas and doesn't require you to do a ton of research, I felt like my reduce, reuse, and recycle habits really improved. It became a habit...It was really fun as well!

The team camaraderie was fun. We kept an email/text chain going to encourage each other.



Integrate Games Into Your Efficiency Efforts!

Questions? Comments? Want more info?

Kathy Kuntz

kkuntz@coolchoices.com

The game was fun. When an activity is fun, people will not only enjoy it, but learn from it - either consciously or not.