



Serious gaming

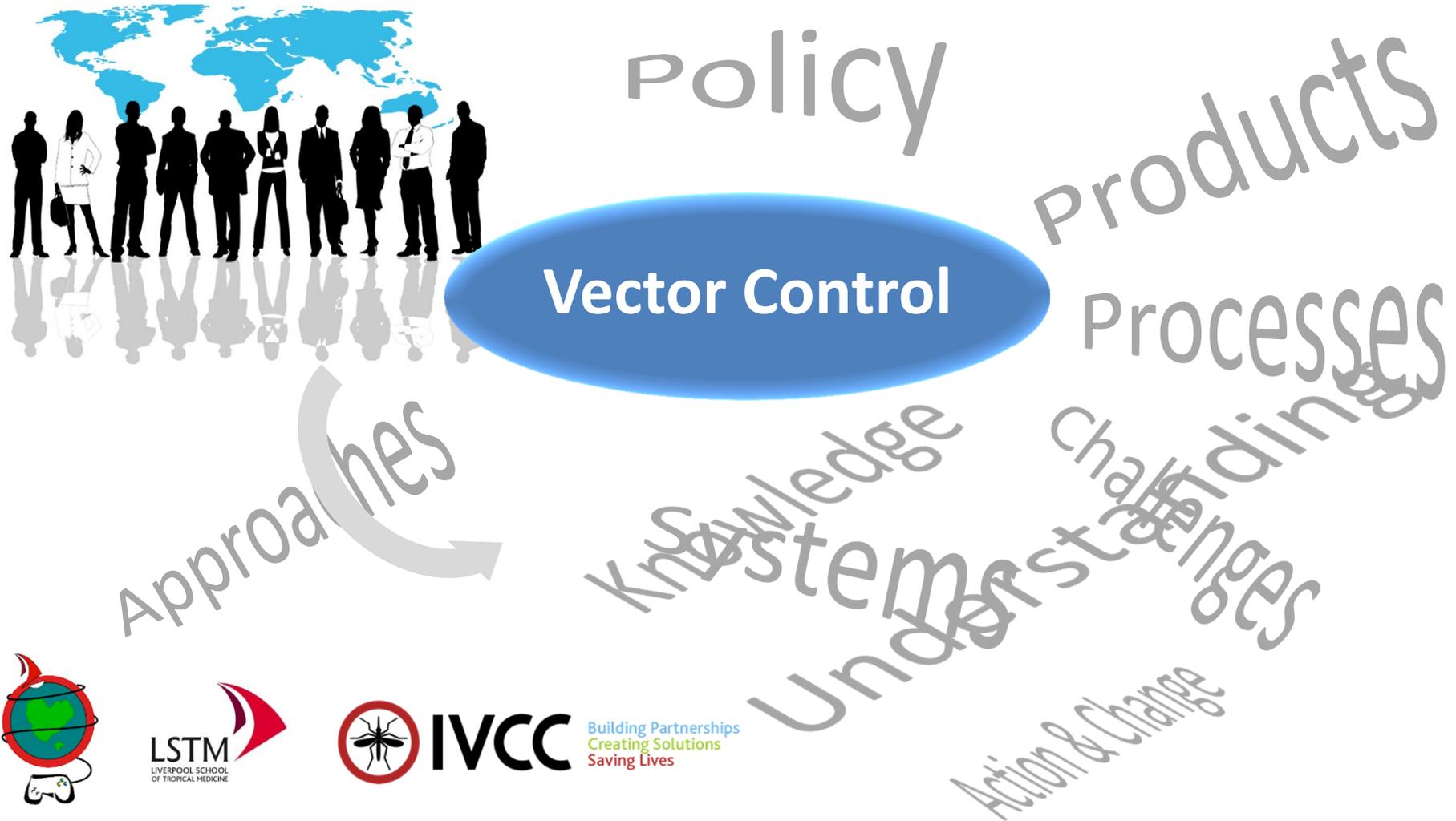
to support insecticide resistance management



Marlize Coleman
Charlotte Hemingway



The Need



IVCC Building Partnerships
Creating Solutions
Saving Lives

Challenge

The Need

Information

Insecticide Resistance

Evidence

Measure of success

Number of documents printed, distributed
Availability online

Number of workshops facilitated

Number of training sessions held

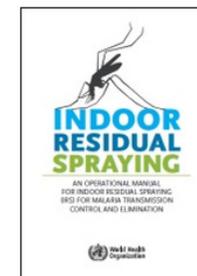
Measure of success

Know, Understand

Internalize (you to our)

Act

Programs



Disseminate & Communicate

Translate into Policy & Practice

Impact

Definitions

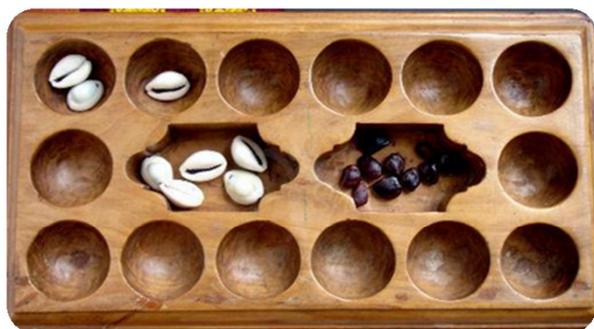
Serious games “have an explicit and carefully thought-out **educational purpose** and are **not** intended to be played **primarily for amusement**. This does not mean that serious games are not, or should not be, entertaining” (Abt, 1970)

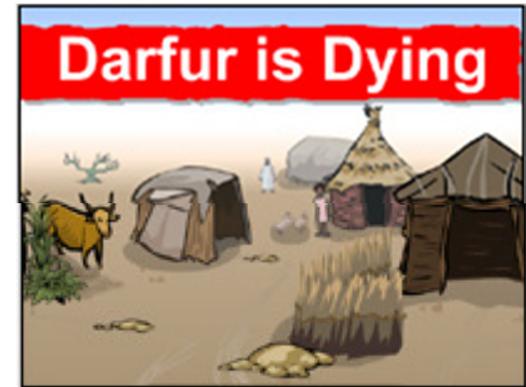
Serious Games have a mental contest, played with a computer in accordance with specific rules that **uses entertainment to further** government or corporate **training, education, health, public policy, and strategic communication objectives**” (Mike Zyda , 2005)





SPACE INVADERS





The Evidence

Meta-analysis studies of serious games

Wouters, P., van Nimwegen, C., van Oostendorp, H., & van der Spek, E. D. (2013, February)

A Meta-Analysis of the Cognitive and Motivational Effects of Serious Games. *Journal of Educational Psychology*. Advance online publication. doi: 10.1037/a0031311

Stizmann, T. (2011) A Meta-Analytic Examination of the Instructional Effectiveness of Computer-based Simulation Games. *Personnel Psychology*, 64, pp. 489-528.

Connolly, T. M., Boyle, E. A., MacArthur, E., Hainey, T., and Boyle, J. M. (2012) A systematic literature review of empirical evidence on computer games and serious games. *Computers & Education* 59, pp. 661–686.



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The Evidence

- More effective than conventional instruction methods.
- Should be supplemented with other instruction methods.
- Should be played in multiple training sessions.
- Should be played in group .
- Games appear to increase learner confidence (self-efficacy).
- Games help increase declarative knowledge, procedural knowledge and retention over traditional non-interactive training.
- Trainees learned more, relative to a comparison group.
- Learning occurred when learners could access the game as many times as desired.
- The most frequently occurring outcomes and impacts of games for learning were knowledge acquisition/content understanding and affective and motivational outcomes.



IVCC

Building Partnerships
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Saving Lives

<http://karlkapp.com>

Our Approach

From Games to Impact

1. Explore

Explore serious gaming for communication and learning.

2. Determine

Determine if gaming is embraced by potential end users and how they see the future and potential use within vector control programmes.

3. Expand

Mobilize the vector control community to assist with the development of a comprehensive insecticide resistance management game in line with operational feedback and needs.

4. Test

Beta test the game, predominantly with end users.

5. Deliver

Support the delivery of the final game to vector control programmes.

6. Track

Track the impact of the game over time on: knowledge, attitude, policy, practices, decisions and outcomes.

7. Review

Review new body of evidence and update the gaming tool for optimal impact.

Where are we?

From Games to Impact

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Pilot

Determine

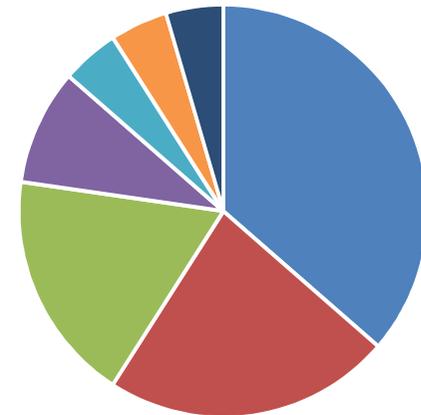
In-country & Online

Objective

Investigate the potential for serious gaming as an enabling tool to assist with communication & learning - IRM

- 8 participants in Malawi
- 15 participants in Zambia

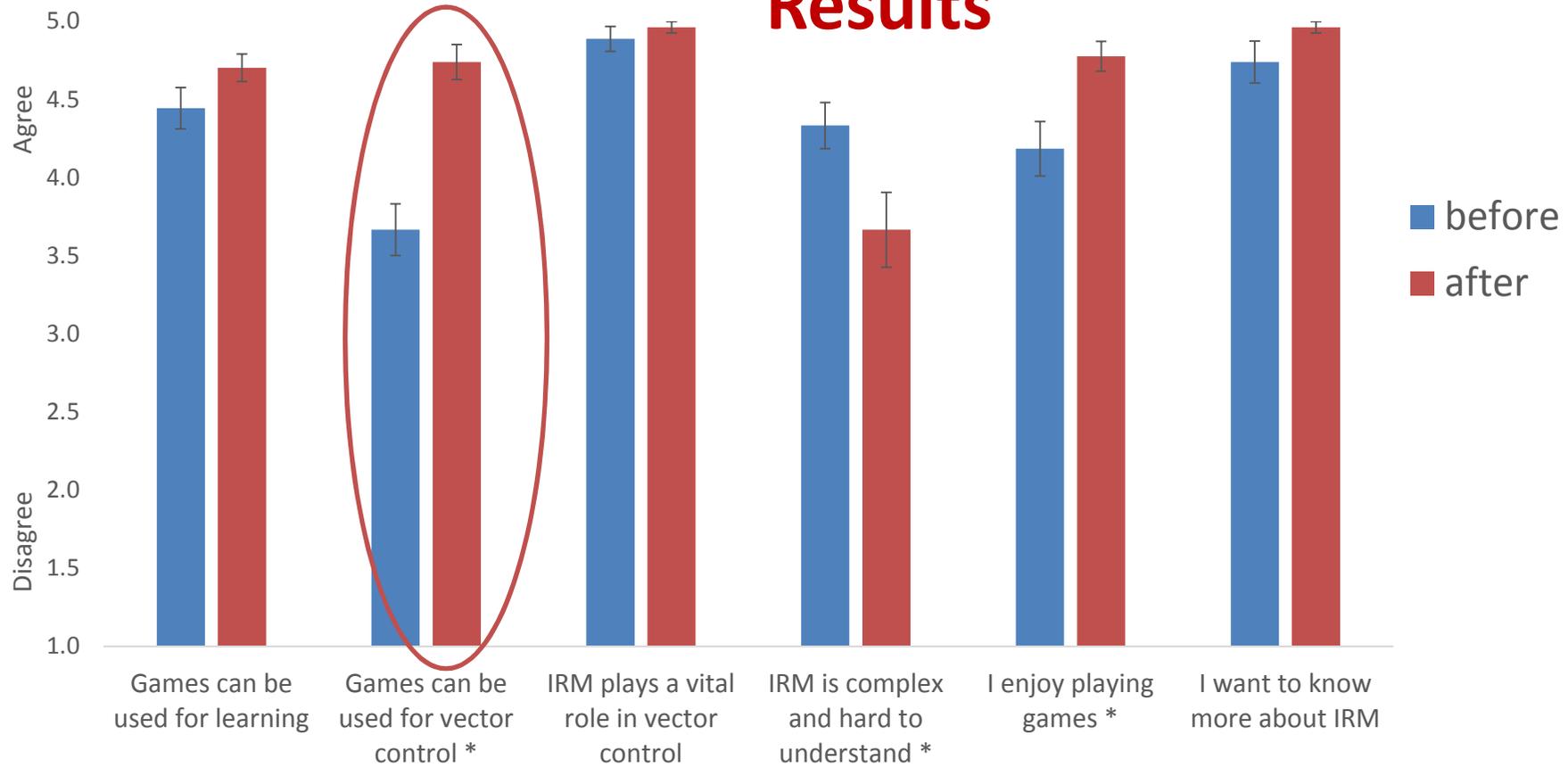
- Entomology
- Environmental Health
- VC Programme Management
- NGO
- PHC
- Research
- Gov - other



- All participants completed an anonymous pre and post questionnaire

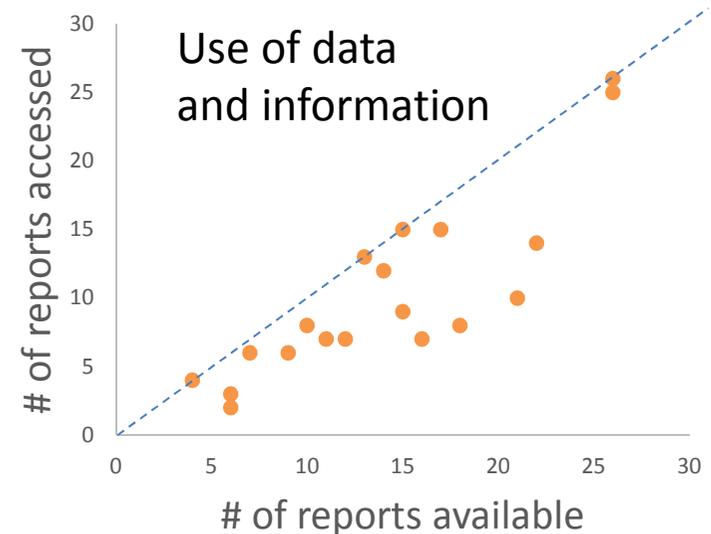


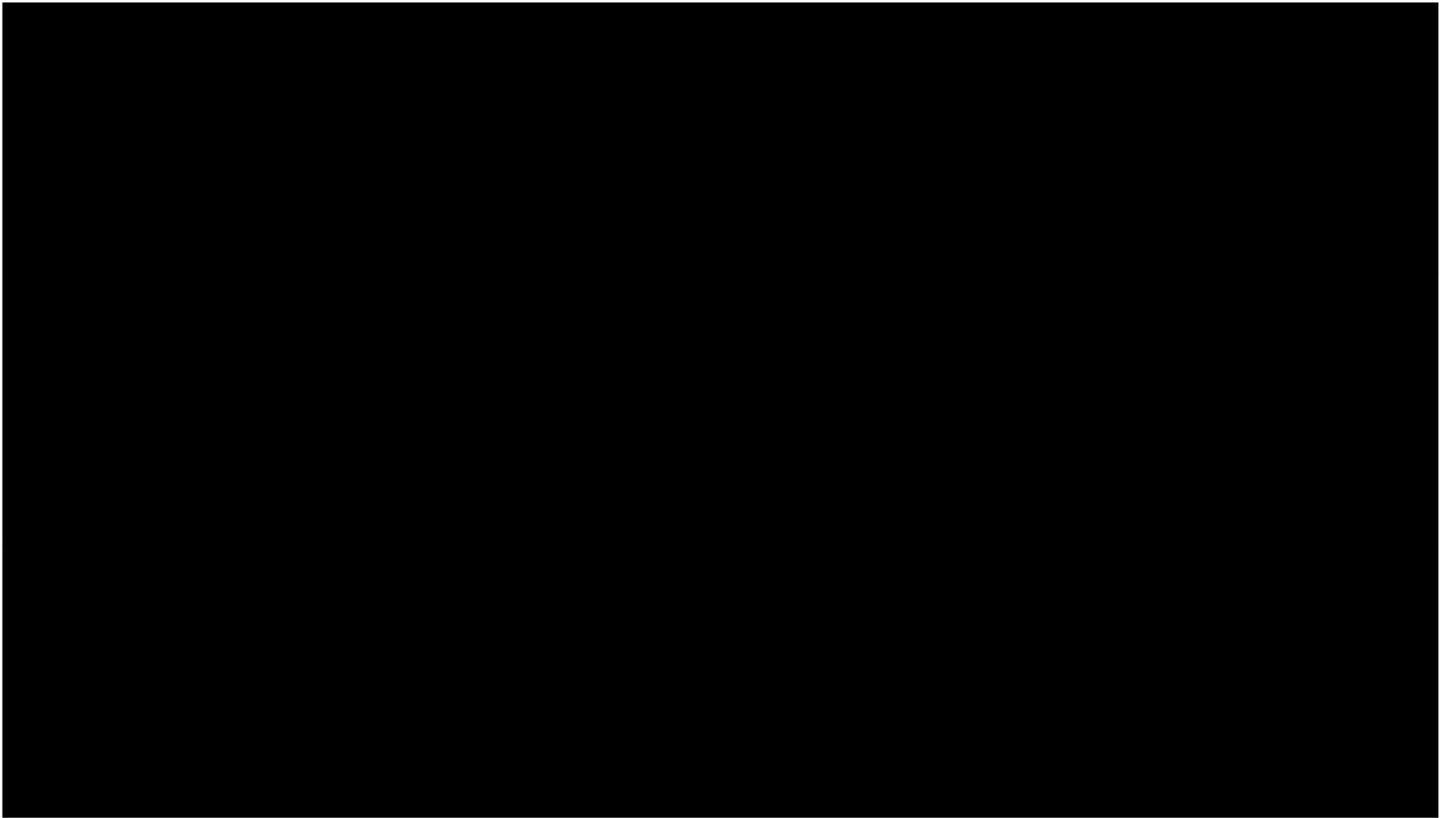
Results



52% Regularly referred to and read GPIRM

- 92 % Found IRM complex and hard to understand
- 92% Wanted to know more..





Where we are aiming to go

Support traditional
Learning & Communication Approaches

Develop an enabling communication and learning tool that is:

- Adaptable – disease, language, graphics, local situation

- Effective, Free and Available

- Sustainable

- Standardized

- Seamless – needs – pilot feedback

- Current – New paradigms

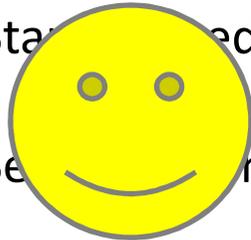
Als

Approaches

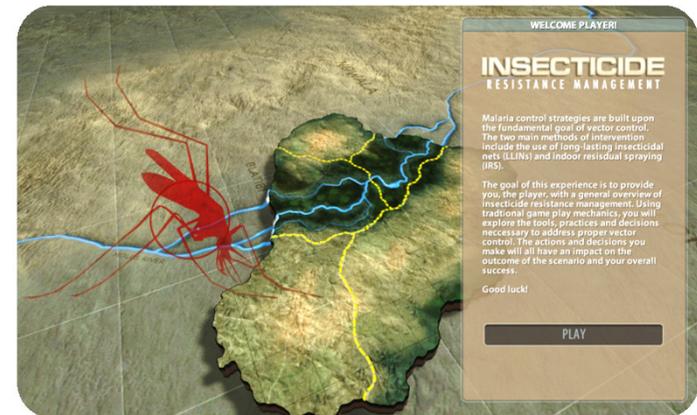
Tools

Products

Evidence



FUN



- Realistic, creates an immersive interactive learning experience

Digital Natives



Coined in 2001 by researcher [Marc Prensky](#), **digital native** is used to describe people born after 1980. Digital migrants?

Mission

To mobilize the vector control community and other stakeholders to **support disease control & elimination programmes in insecticide resistance management**, effectively communicating current guidelines and evidence to **optimise the impact of interventions**.



There are a number of ways you can get involved

Get Gaming

For a chance to play the pilot version of the game just get in contact, we're always after more data to support the next phase of development.

Get Talking

If you know of a public health event or meeting where the game would make a suitable addition then let us know.

Get Modelling

Model are very useful to guide game development



marlize.coleman@lstmed.ac.uk

<http://www.weignitefun.com/IRS>





WELCOME PLAYER!

INSECTICIDE

RESISTANCE MANAGEMENT

Malaria control strategies are built upon the fundamental goal of vector control. The two main methods of intervention include the use of long-lasting insecticidal nets (LLINs) and indoor residual spraying (IRS).

The goal of this experience is to provide you, the player, with a general overview of insecticide resistance management. Using traditional game play mechanics, you will explore the tools, practices and decisions necessary to address proper vector control. The actions and decisions you make will all have an impact on the outcome of the scenario and your overall success.

Good luck!

PLAY