Challenges facing vector-borne disease control, collaboration, and the role of the private sector

JITMM Meeting 2018

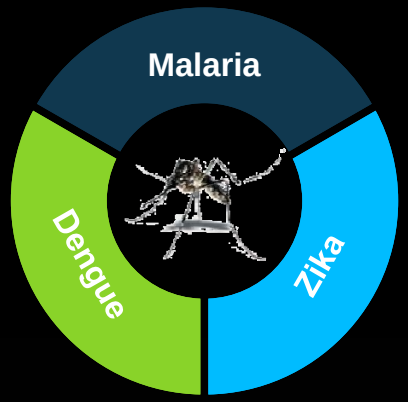
Jason Nash
Market Development Manager

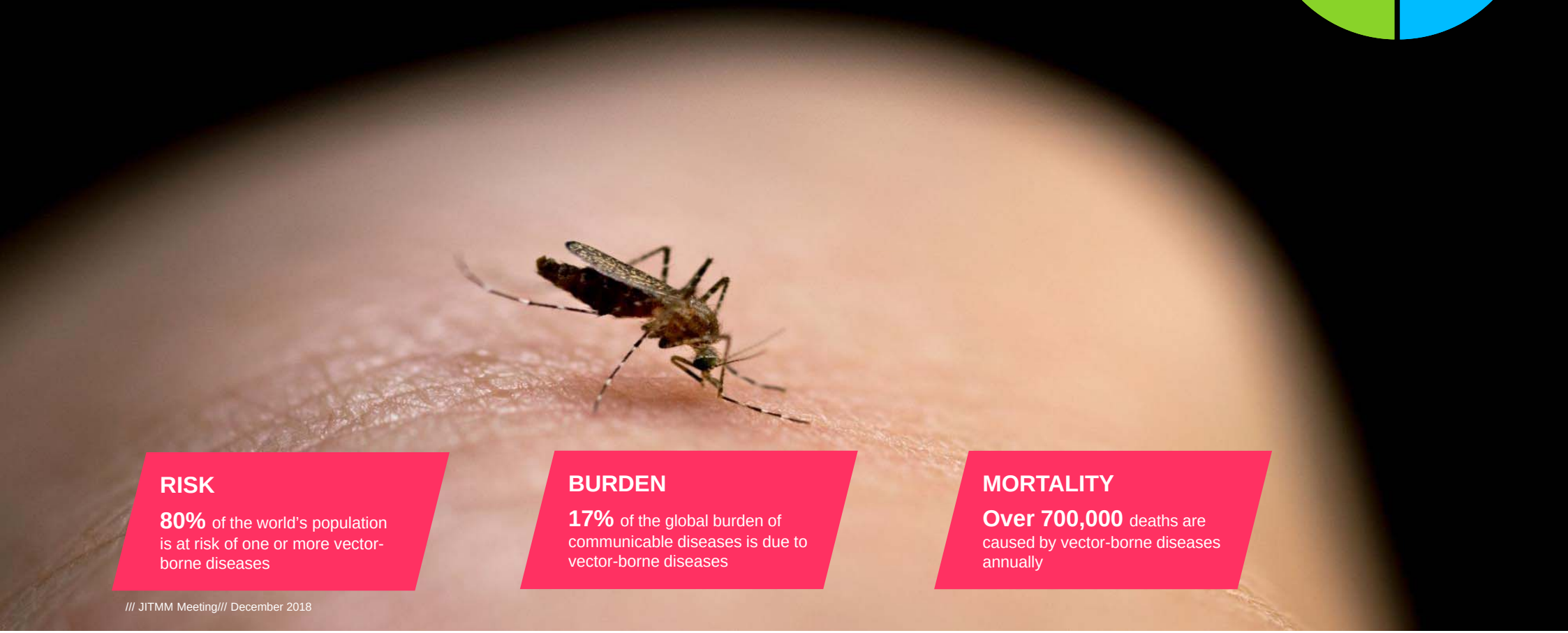
Topics

- Challenges in vector control
- Accelerating access to new technologies
- Collaboration
- How the private sector can help
- Some examples

Vector-borne diseases…

A major threat to the health of societies around the world, which exact an immense toll on economies, restricting both rural and urban development.





RISK

80% of the world's population is at risk of one or more vector-borne diseases

BURDEN

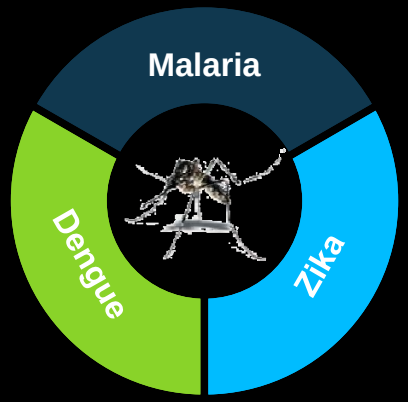
17% of the global burden of communicable diseases is due to vector-borne diseases

MORTALITY

Over 700,000 deaths are caused by vector-borne diseases annually

Vector-borne diseases…

A mixed picture in managing these diseases.

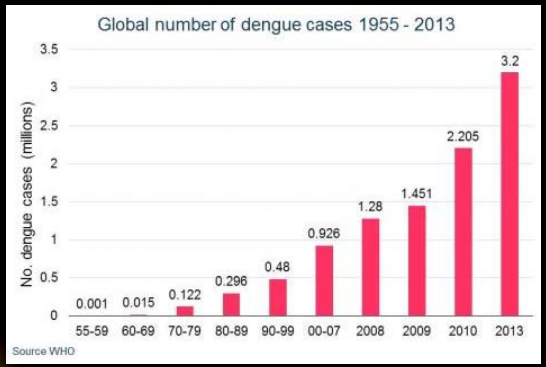


"*It is reasonable to expect emergence of some new vector-borne diseases and further intensification of others, particularly those viral diseases transmitted by Aedes mosquitoes that are closely associated with urbanisation*" Source: WHO

- Impressive gains against: +
  - malaria
  - lymphatic filariasis
  - chagas

- Yet major outbreaks of: −
  - dengue
  - chikungunya
  - yellow fever
  - Zika

Dengue cases climbing:



What is being done today is not working!

Challenges faced:

Malaria

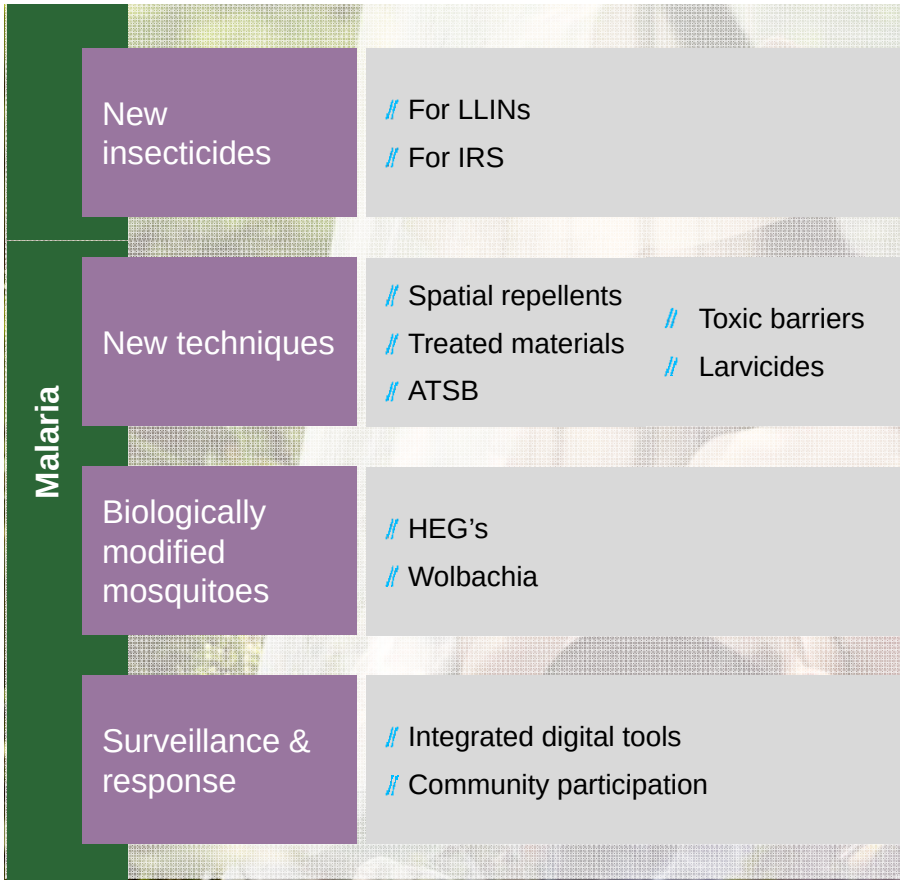
- Several countries striving towards elimination
  - Managing drug e.g. artemisinin resistance
  - Limited tools and insecticide resistance
  - Limited accessibility to at risk populations
  - Limited operational capacity
  - Securing ongoing funding

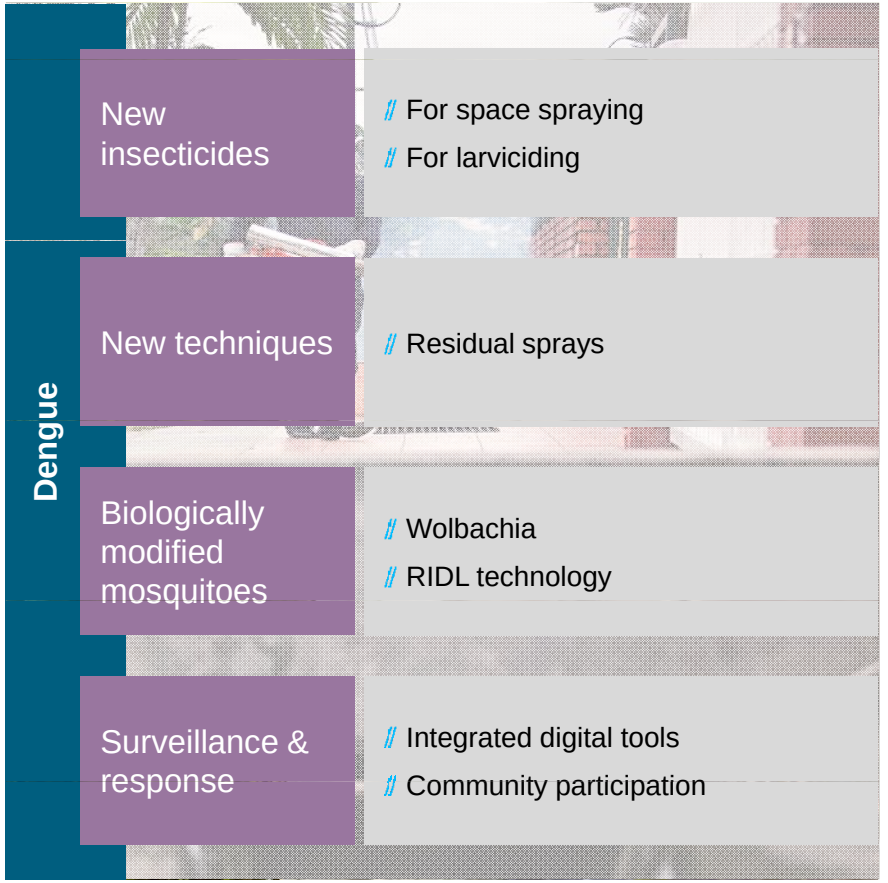
Challenges faced:

Dengue and other arboviral diseases

- Disease incidence is increasing
  - Vector control is largely reactive
  - Urbanisation and increased travel
  - Limited tools and insecticide resistance
  - Limited operational capacity
  - Variable government commitment (funding)
  - Need for widespread community engagement

Some new vector control technologies are emerging:





Accelerating access to these new technologies:

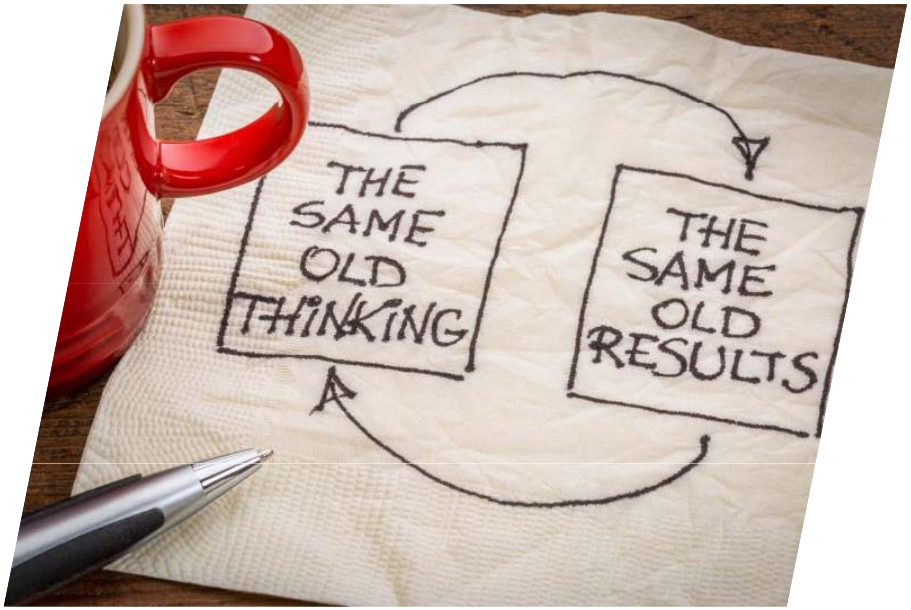
Key traits for success

Openness:

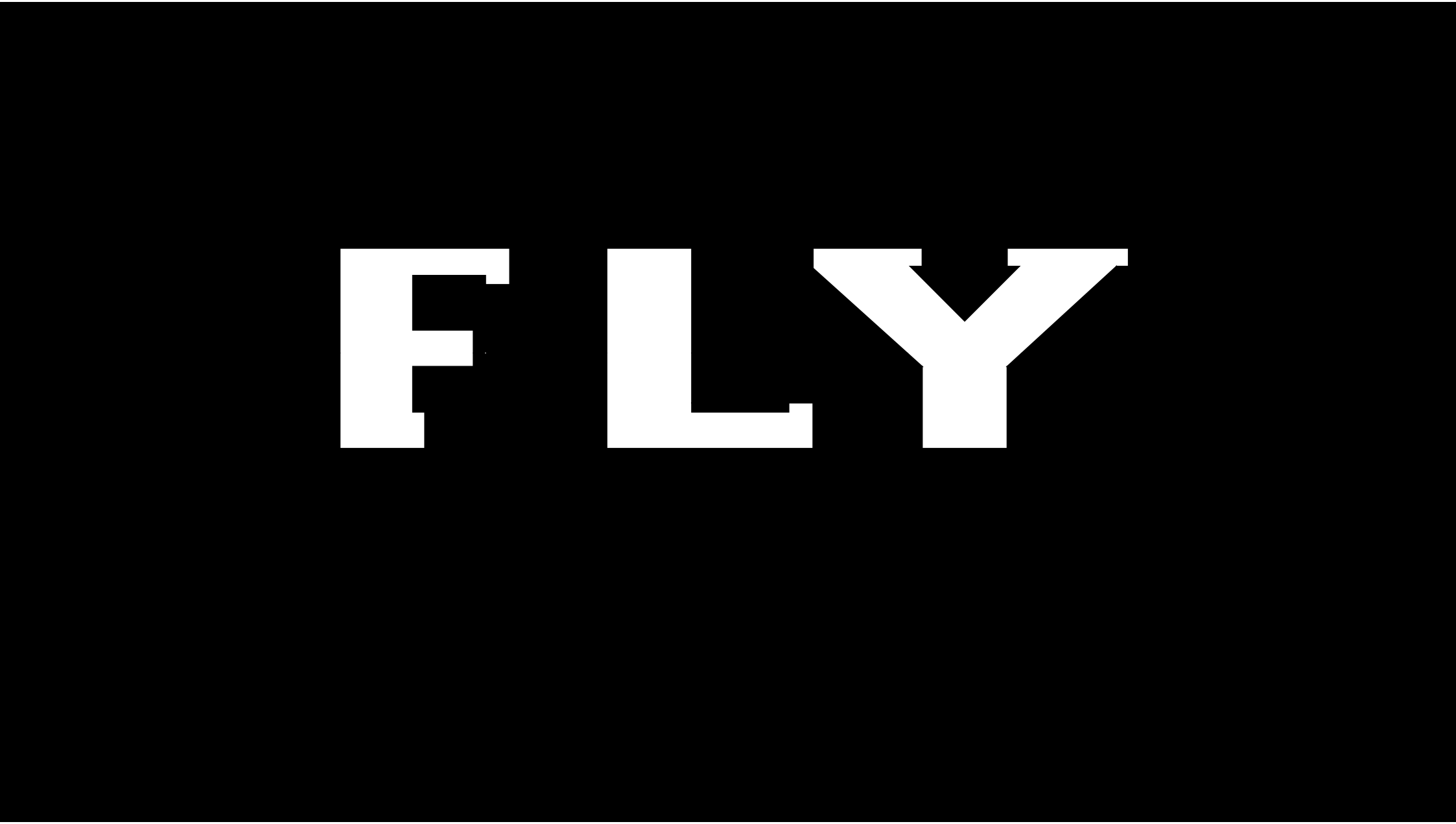
// Accepting of new ideas

// Looking at, and doing things differently

// Willingness & acceptance of risk / failure



A short exercise…


FLY

Accelerating access to these new technologies:

Key traits for success

Collaboration:

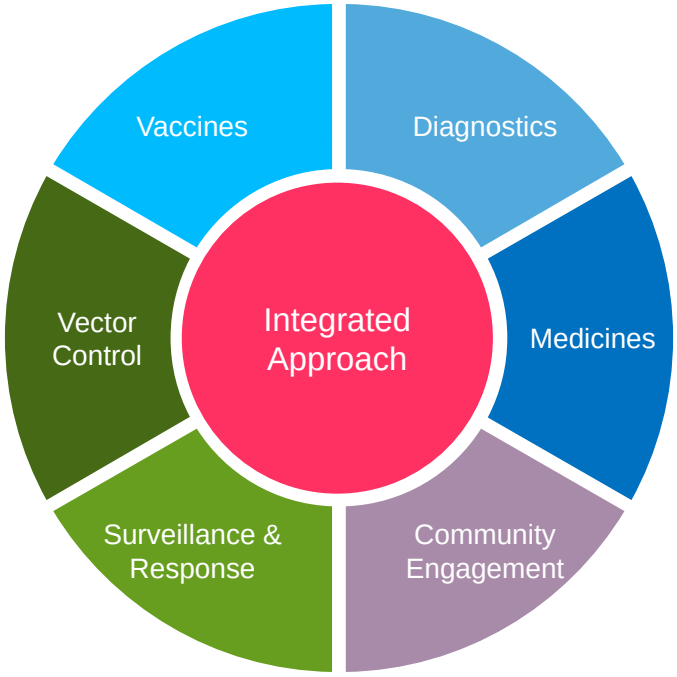
// Trusting

// Sharing

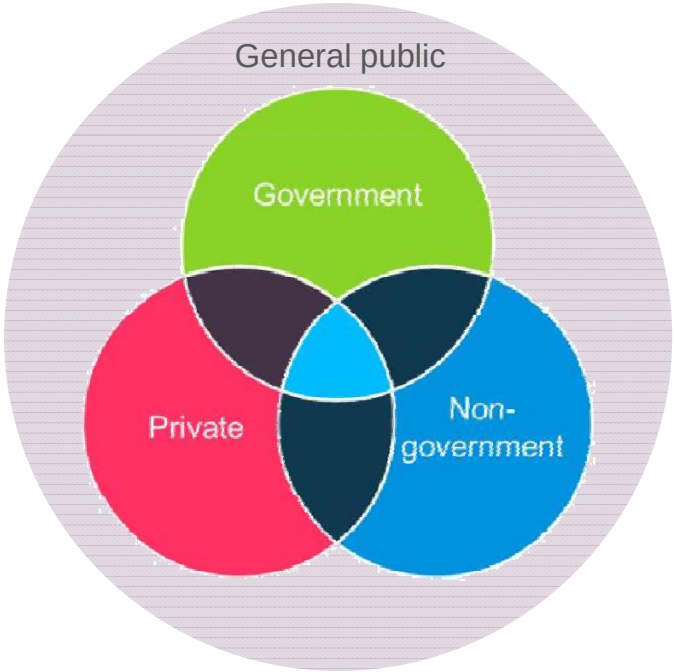
// Co-creating

Accelerating access to these new technologies:

New technologies should be adopted as part of an **integrated** approach.



Technology development & adoption can be accelerated through a **collaborative** approach.



Accelerating access to these new technologies:

Why is collaboration so important?:

// No institution can be successful alone

// There are limited resources – have to utilise what exists

// Learn from expertise of others

We share a common goal: reducing the burden of vector-borne diseases

What can the private sector contribute?

Some examples

Vector Control Expert Meetings

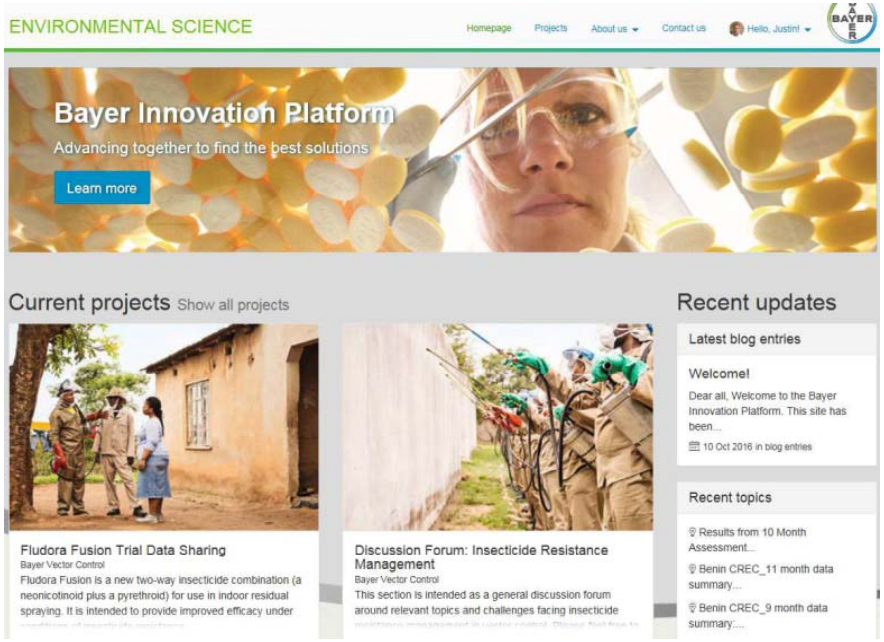
What are they?

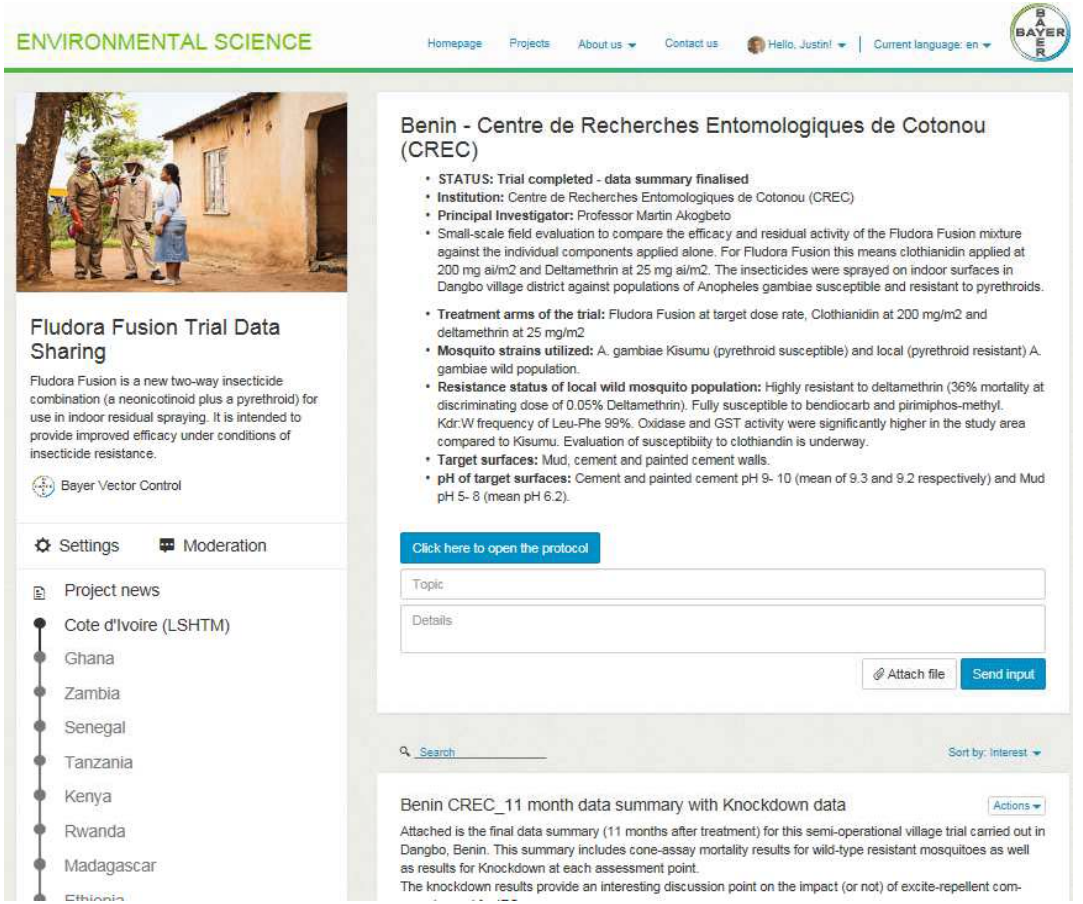
// Annual meetings with collaborators and partners in Asian countries to share information / experiences on vector control.

An Innovation Platform

What is it?

// A private platform for sharing data summaries with selected partners from our insecticide trials.



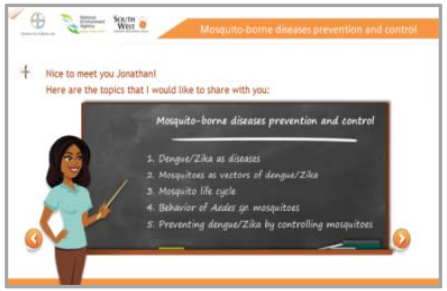


Community engagement tools

What are they?

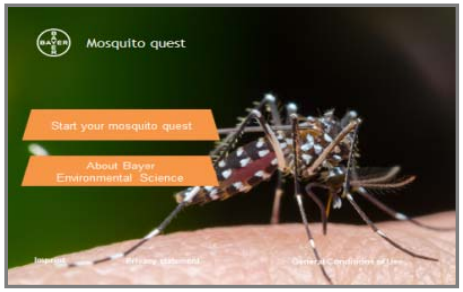
// Mosquito Learning Lab

// An online educational tool
- on how to prevent dengue / Zika



// Mosquito Quest

// A VR experience
- to identify mosquito breeding sites in a home



Digital vector control platform

What is it?

// A digital platform to collect, analyse, and present relevant data - to enable better informed vector management decisions.

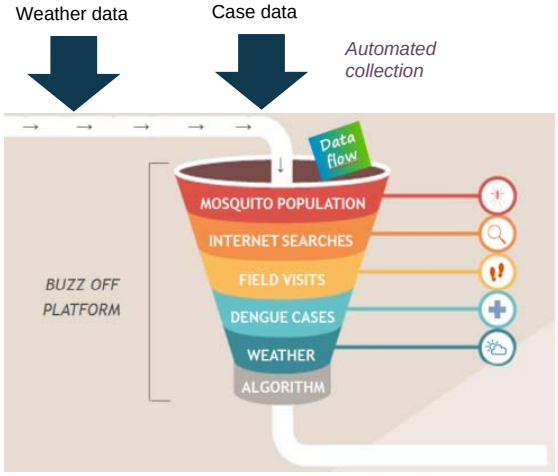
App for data collection | **Data analysis platform** | **Dashboard & reporting tool**

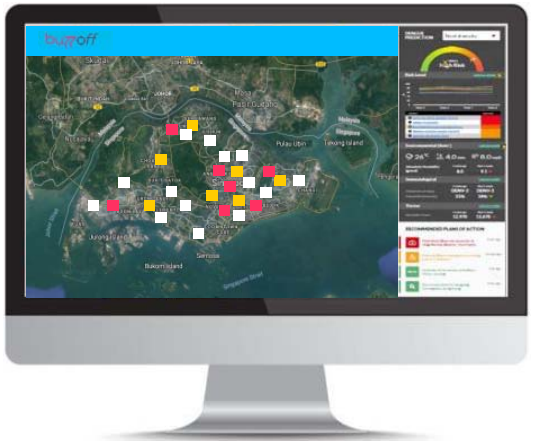
Mosquito counts

Type of breeding site

Type of building or environment

Manually collected data and photos





Questions?