# The Diffusion of Innovation, and Trojan Mice

Clinical Associate Professor David Caldicott, B.Sc(Hons), MBBS(Lond), FRCEM, PG Dip.Clin.Tox

Emergency Consultant, North Canberra Hospital Clinical Senior Lecturer, ANU Clinical Lead, Pill Testing Australia & CanTEST

# (What the *Next* 25 years of Drug Checking in Australia Might Look Like)

Clinical Associate Professor David Caldicott, B.Sc(Hons), MBBS(Lond), FRCEM, PG Dip.Clin.Tox

Emergency Consultant, North Canberra Hospital Clinical Senior Lecturer, ANU Clinical Lead, Pill Testing Australia & CanTEST

## We've Come a Long Way Already...









#### 2024

- First Government Sanctioned Pill Testing, REL, QLD
- First Fixed Site Drug Checking, QLD
- Announcement of funding for drug checking in VIC

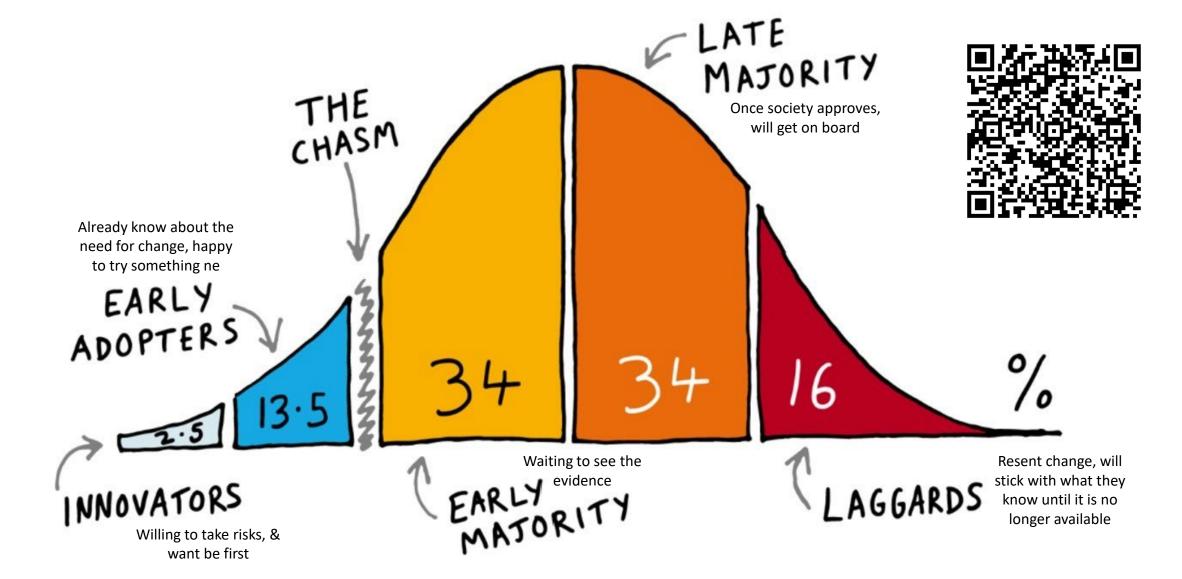




First Fixed Site
Drug Checking Service,
ACT

2000 2005 2010 2015 2020 2025

#### Diffusion of Innovation



#### Where is it all going...?







#### Societal changes

What drugs will people want to use? What drugs will be available?

Detection technology

Manufacturing technology

#### Technological changes

2025 2030 2035 2040 2045 2050

Turns out,

augury
is *really* complicated stuff...





# ERROR PROBLEM DOES NOT EXIST

#### How do we plan for 'unknown unknowns'?



#### How do we plan for 'unknown unknowns'?









# Introducing...

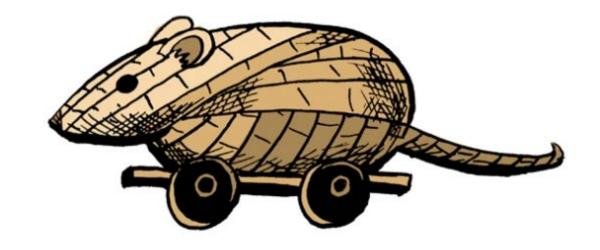


Our Trojan Mouse\*

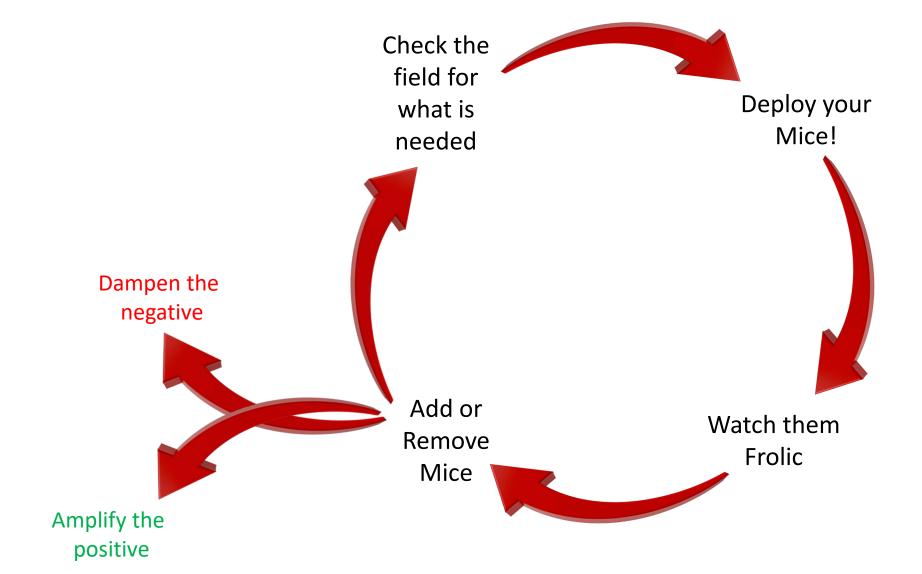


#### Trojan Mice (Safe to Fail Probes, for Complex Problems)

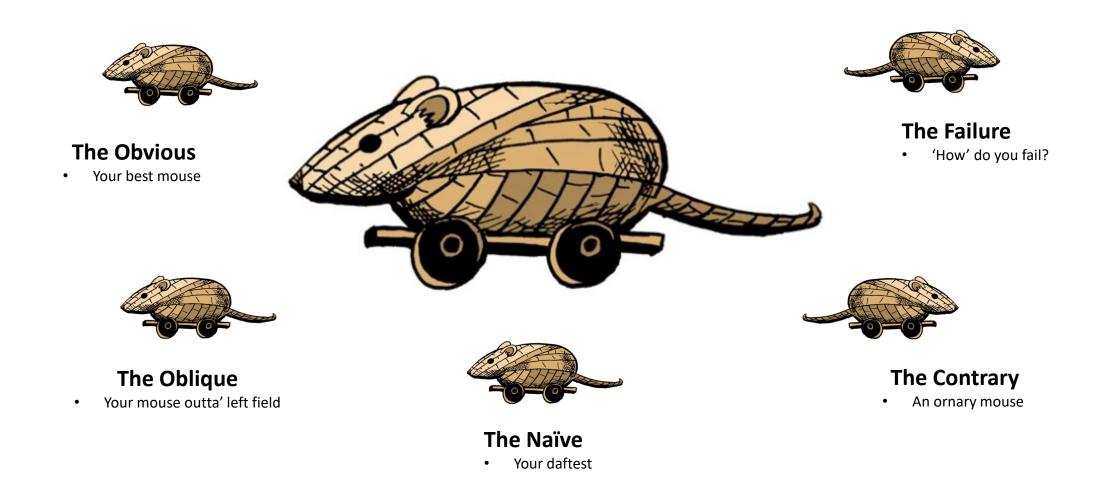
- an alternative approach to the 'big single model' approach to problem solving
- probe and gather data about complex / wicked problems
- testing more ideas, simultaneously
- more, and more diverse, approaches to a big problem
- the more Trojan Mice you deploy, the more data you'll get



## 'How' do Trojan Mice Work?



#### Types of Trojan Mice to Launch



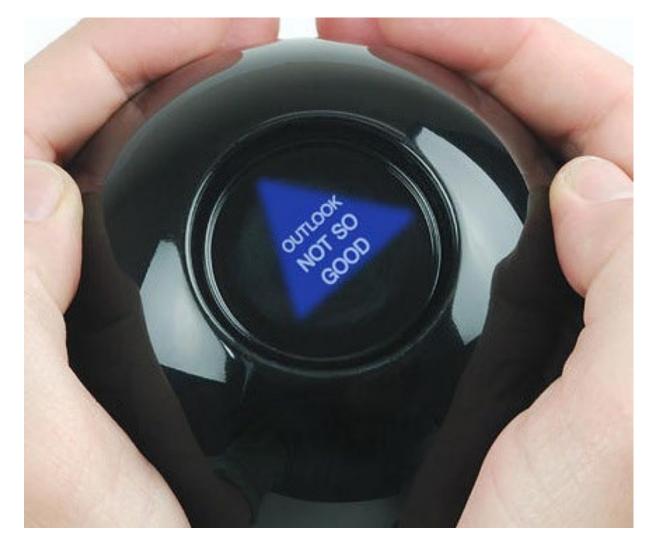
## 'Why' do Trojan Mice Work?

- "No mice were harmed in their deployment"
- Quick- days, not months
- Cheap- cents, not dollars
- Parallel- many operating away at the same time
- Measurable- generates data
- Light Governance- doesn't need an abundance of 'permissions' or 'approvals' (does need 'trust')
- Both PTA & CanTEST have functioned as Trojan Mice





#### So what *does* the future hold?







#### **Politics**

- Real life implications
- Unpredictability is problematic for progressive causes
  - QLD
  - VIC
  - Federal Australia
  - America

#### Queensland Premier David Crisafulli reluctant to answer whether Schoolies pill testing will go ahead

By Jessica Lamb, Madeleine Cross, Bernadette Young, Nicole Dyer and Sarah Cumming

ABC Gold Coast

Drugs

Tue 29 Oct



Labor previously announced pill testing would be available during Schoolies on the Gold Coast in November. (ABC News: Damien Larkins)

## More Synthetics

Less cultivation

'Any time, any place' production

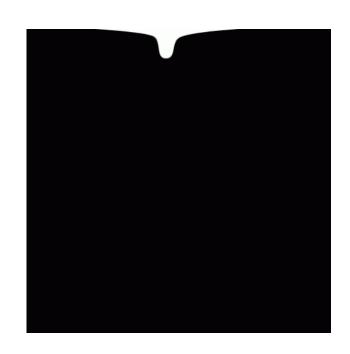
Ease of transport

Use of active intermediates (pharmacological)



#### Iron Law (on steroids), & Cocktails

- Seeing that already with nitazenes
- Real implications for limits of detection
- Increasingly 'professional' skills needed
- Increased & variable *polysubstance* threat
  - 'Down'
  - 'Tusi'
  - Novel benzodiazepines





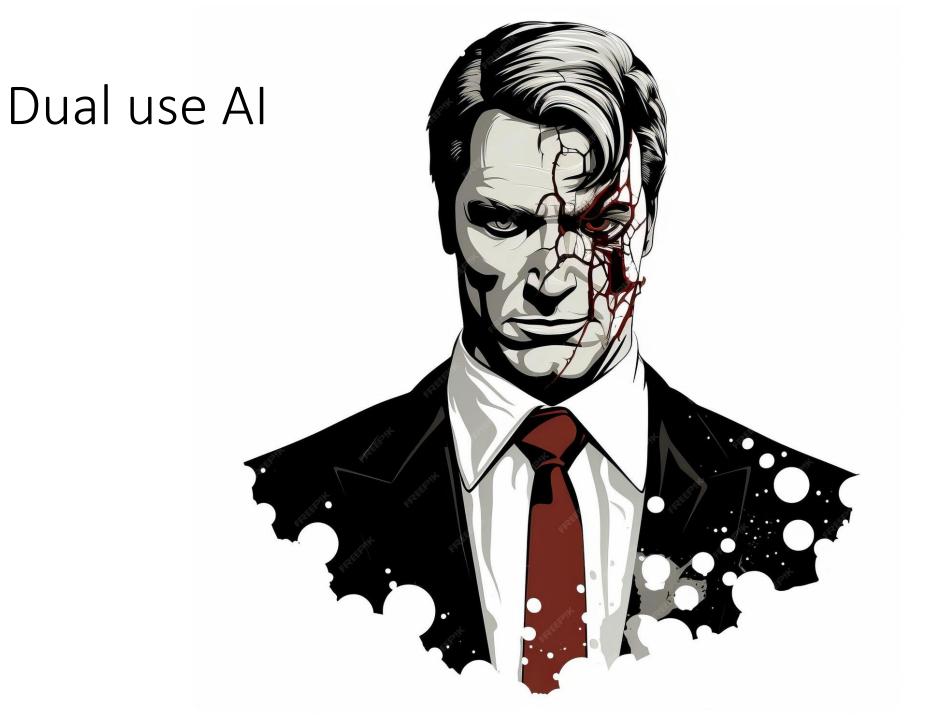
#### State Based Actors...

- As a source of income for growing numbers of sanctioned countries
  - North Korea
  - Syria

• By way of revenge...





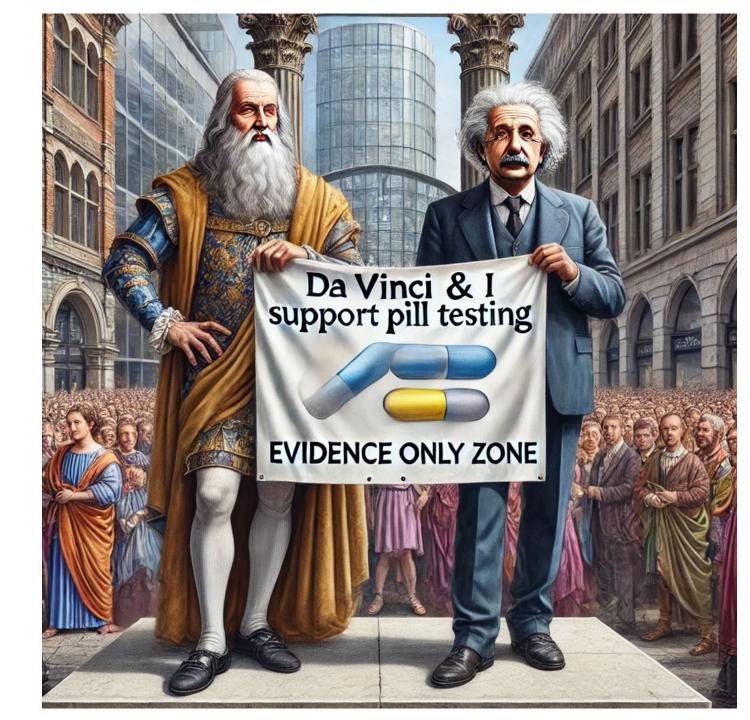


## Dual use Al





#### Opportunities...



# Maybe some benefits on the horizon...



# Réinventir

#### In summary...

- Effective drug checking is always likely to be a frontier endeavor
- The *need* for it is likely to be greater in the next 25 years than it was in the last 25 years
- It's not going to be any easier- global, as well as interdisciplinary, collegiality is a sine qua non
- Future drug checking services will need to be as nimble as the environment they are destined to face...

## Much like a mouse.



#### Acknowledgements











