



# Constrained optimisation for tabular suppression in the ABS

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[www.abs.gov.au](http://www.abs.gov.au)

# Transformation agenda

## Who

- The ABS of the Future
- Users of ABS Data

## What

- Is fundamentally transforming across all aspects of the organisation

## Why

- To remain relevant and to capitalise on the opportunities of a dynamic information environment
- Ensure we continue to meet our legislative requirements and manage risk in an ever changing environment

## How

- Underpinned by the Statistical Business Transformation Program (SBT Program)
- Transforming the way we collect, manage and deliver information and statistics

## When

- 2020 Statistical Business Transformation Program complete



## Status quo

- DAAS
- SAS/Excel

## SBT Program

- Developing standardised services for data confidentiality

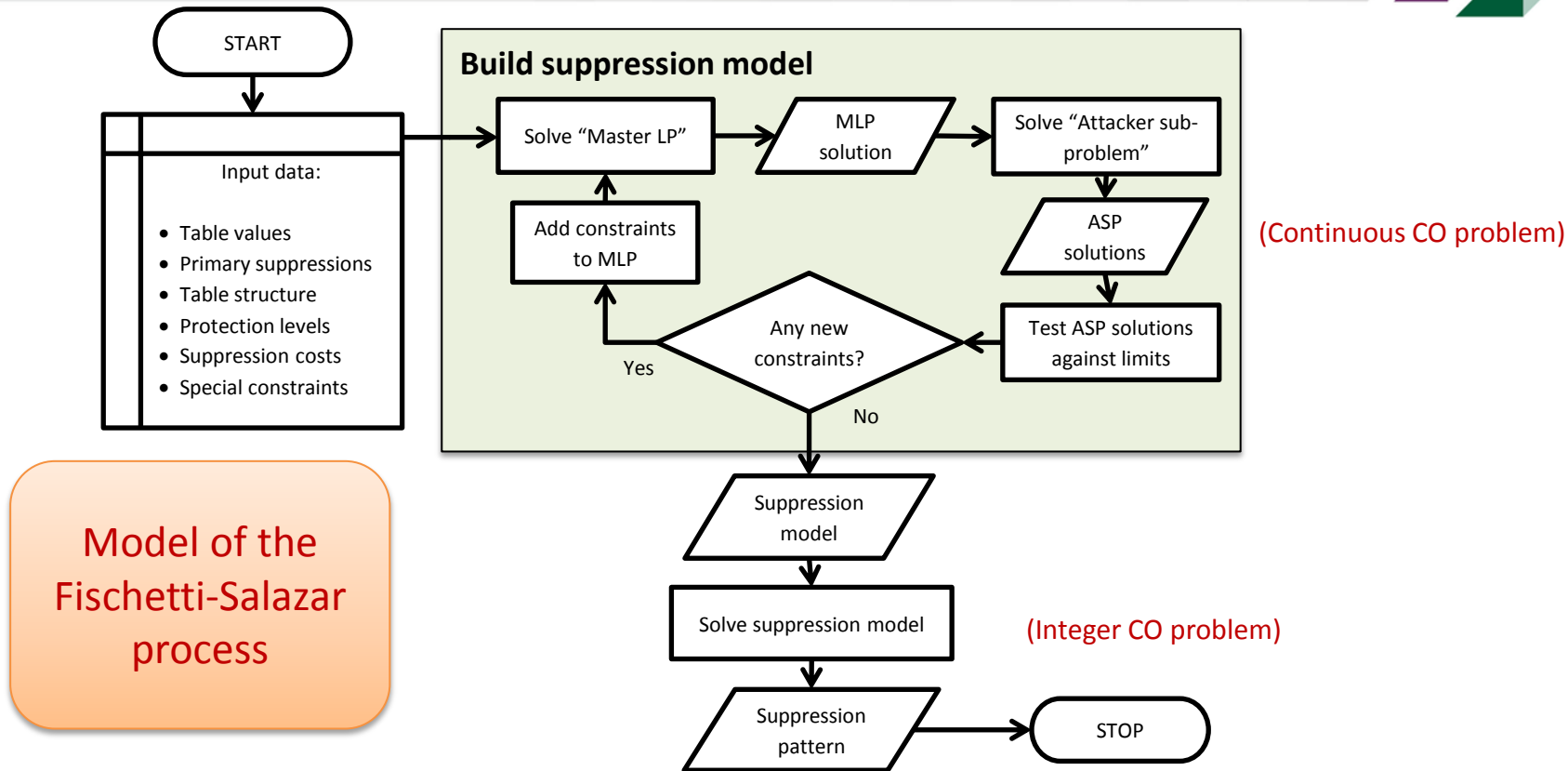


2015

Alternatives  
considered

- Tau-Argus

# Constrained optimisation method





## A suppression pattern that....

- Satisfies the protection levels
- Maximises the utility of the table
- Minimises the sum of the cost of the suppressed cells

### Protection level

- Confirm for primary suppressions
- Check if particularly large

### Total cost of suppressed cells

- As an absolute value
- Relative to some optimal value

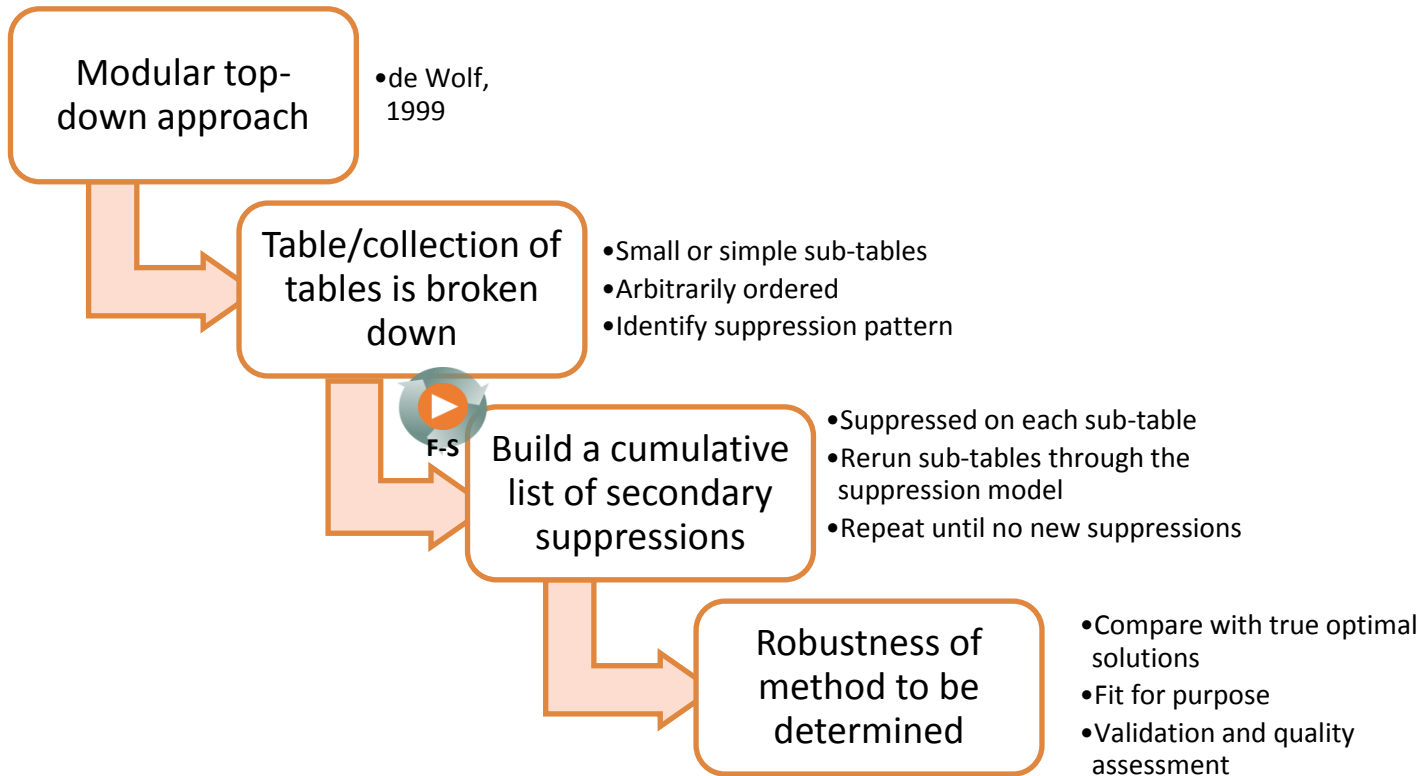
### Number and total value

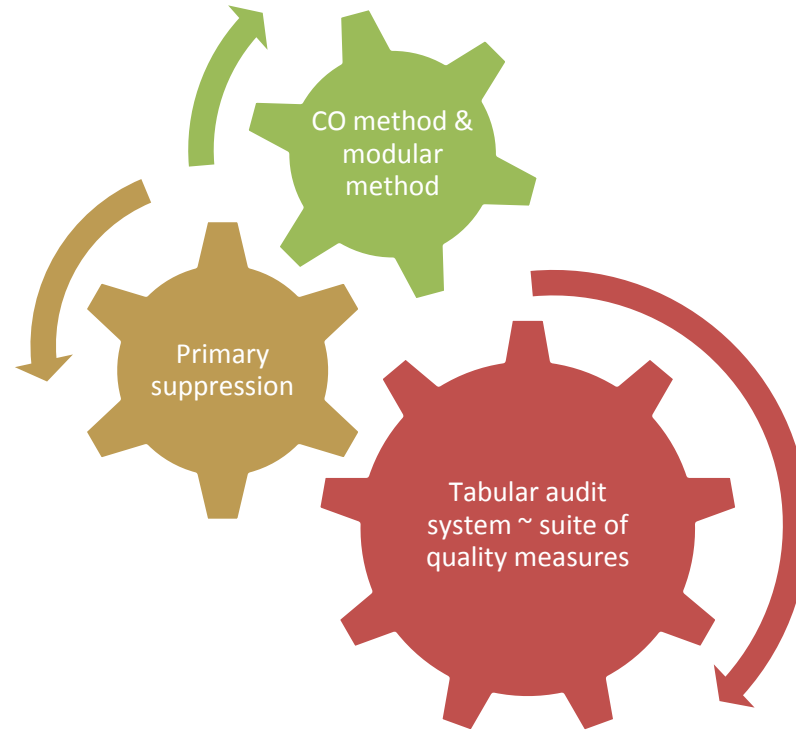
- As an absolute value
- Relative to the size and total value of the table

### Additional measures

- As they emerge
- For more complex tables (?)

# Complex tables







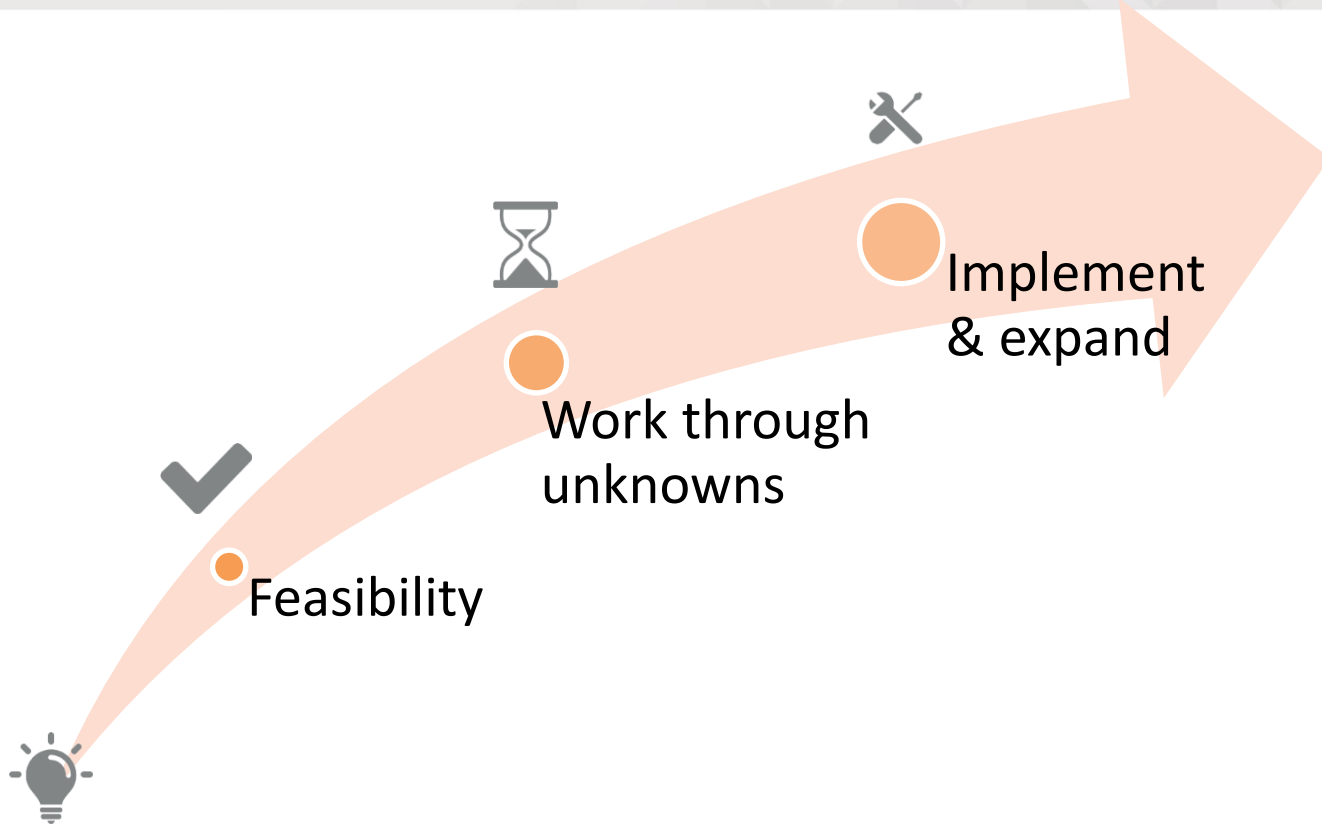
- **Input data flexibility**
- **Use of common infrastructure**
- **Model flexibility**



- **Vulnerability**
- **Scalability**
- **Management of standards**



# Where to from here?



# Questions?

