



# Posdem: the selection process between probability sampling plans using a software based on empirical superpopulation approach

Session number 3

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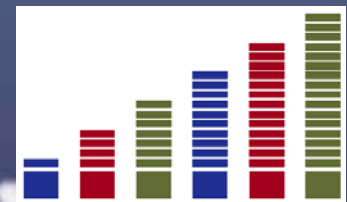


Madrid, May 31 - June 3

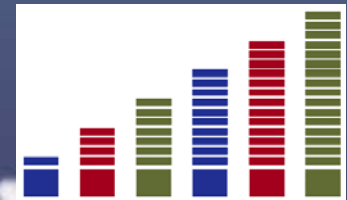
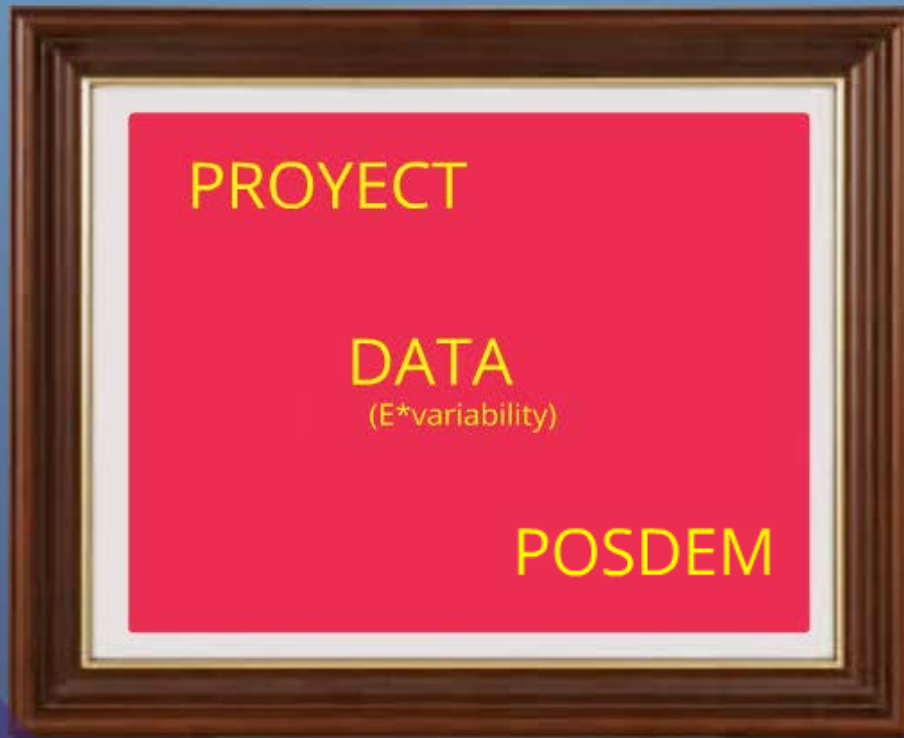
# RELIABILITY & FRAME

PROYECT

DATA  
(E\*variability)



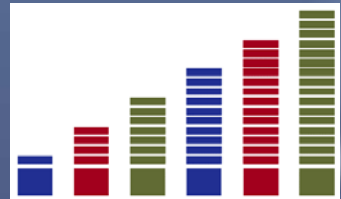
# RELIABILITY & FRAME



28 SAMPLING METHODS  
ANY TIME ANY SURVEY FRAME  
ANY STATISTICAL PROJECT

**POSDEM**

**STATISTICAL TOOL**

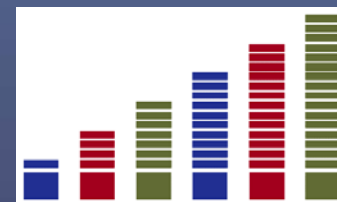


# THE OBJECTIVE

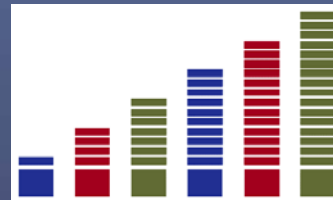
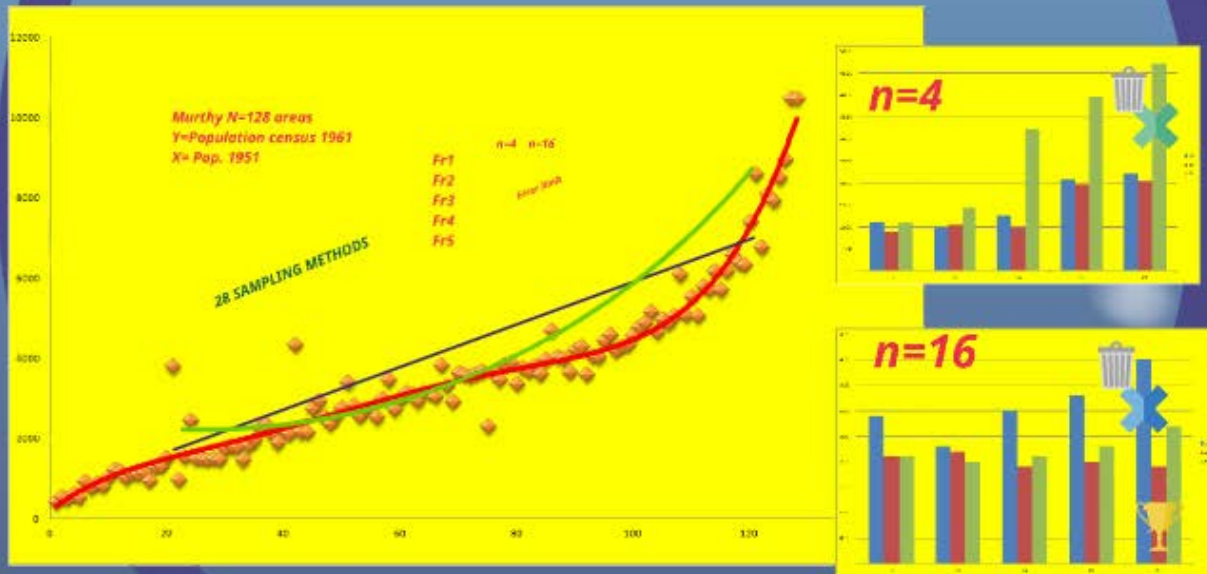
^

X

(E\*variability)

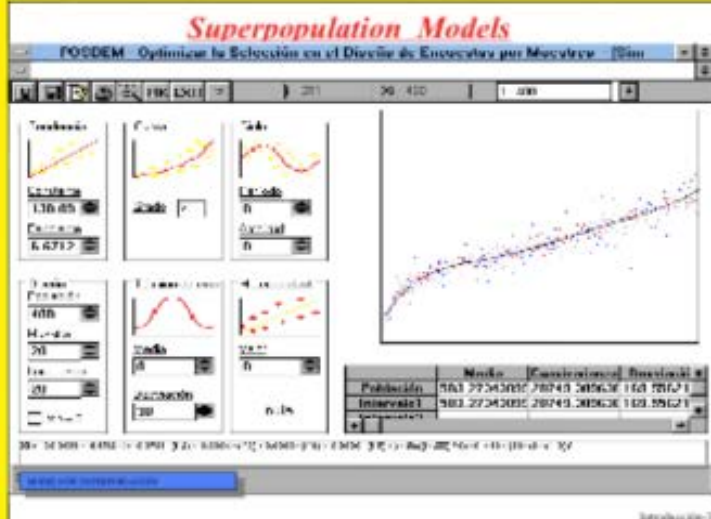


# HOW TO GET THE BEST SAMPLE?



# STABILITY & ROBUSTNESS.

### Superpopulation Models



**POSDEM - Optimizar la Selección en el Diseño de Encuestas por Muestra**

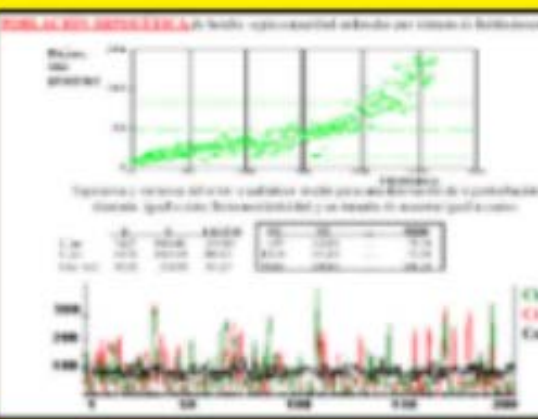
**Tablas:**

**Estadísticos:**

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	Media	Coeficiente de Variación
Parámetro	103.27342000	20749.205630
Intervalo	103.27342000	20749.205630

### COMPARACIÓN DE ESTIMADORES



**Estimador**


**Estimador**

$$s^2(\text{media}) = \frac{\sum (m_i \cdot h_i)^2}{n}$$

$$s^2(\text{media}) = \frac{\sum (m_i \cdot h_i - \bar{m})^2}{n-1}$$

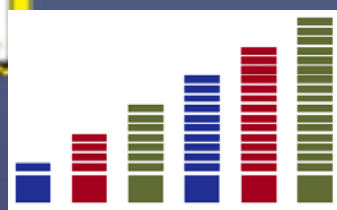
$$s^2(\text{media}) = \frac{\sum (m_i \cdot h_i)^2}{n} - \bar{m}^2$$

### ESTIMACIÓN DE LA VARIANZA



**Estimador**

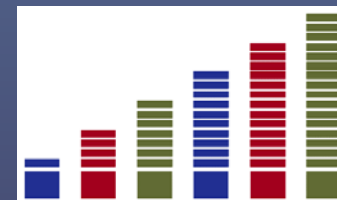
**Estimador**



# WATH DOES POSDEM MEAN ?

" **Sampling** is not a mere substitution of a partial coverage for a total coverage. Sampling is the science and art of **controlling and measuring the reliability of useful statistical information** through the theory of probability"

(Deming 1950)



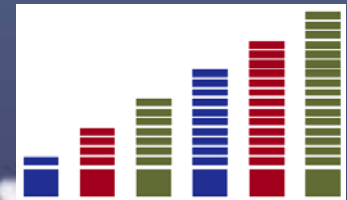


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