

**M-TV Research presents:**

# Vanguard project

Maurits Siemonsma - To Van Cao

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# Outline

1. Research objective
2. Preliminary analysis
3. Hypotheses formed
4. Analysis of KPI's
5. Other findings
6. Conclusion
7. Advice
8. Challenges
9. Further developments



$H_1$

$H_2$

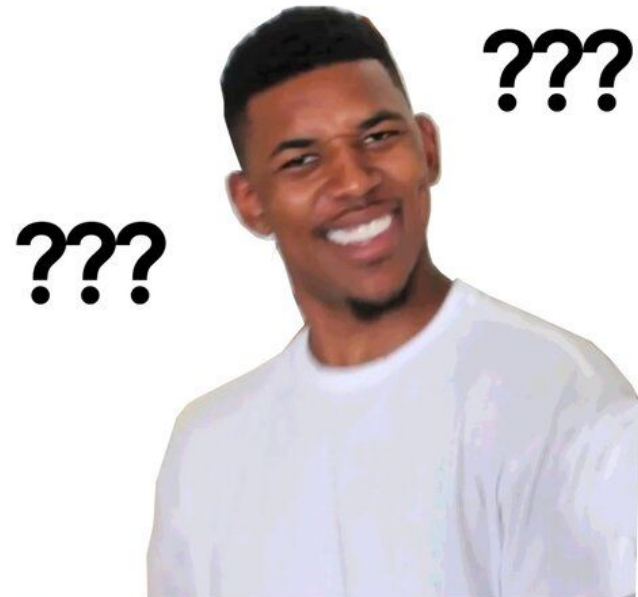
$H_3$

# Research objective

*Testing and comparison of a new User Interface (UI) design to improve client experience and onboarding rates.*



Does a well-designed website UI contribute  
to higher KPI performance?

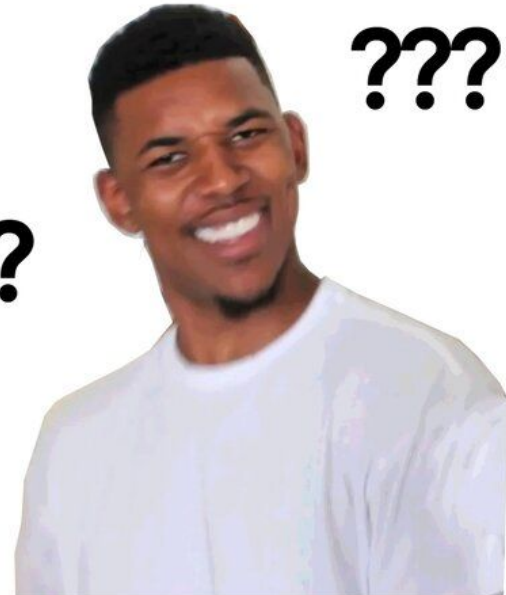


Does a well-designed website UI contribute  
to higher KPI performance?

**It probably depends...**

**???**

**???**



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# Preliminary Analysis

1. Group comparison: are they weighted equally?
2. Exploring data: what is available?
3. Data cleaning : outliers suppression
4. Defining KPIs:
  - a. Time-related
  - b. Count-related
  - c. Age-related
  - d. Error definition = return to previous step, i.e. “back step”



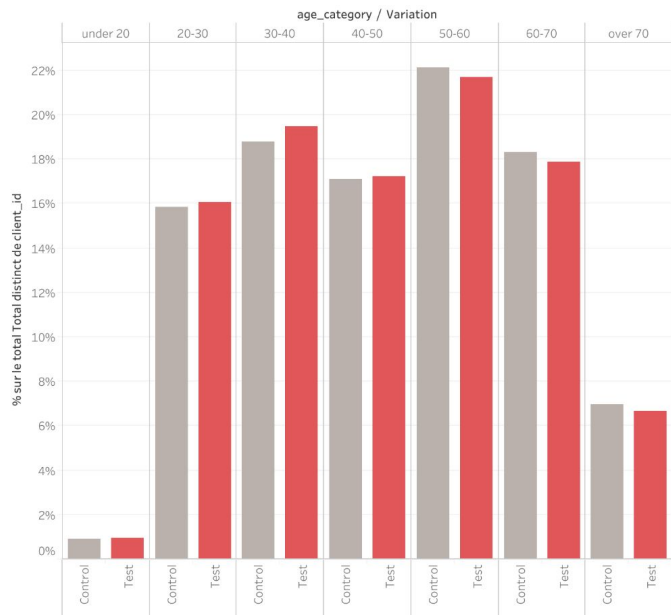
# Sample groups presentation

Control	26 K clients
Test	23 K clients

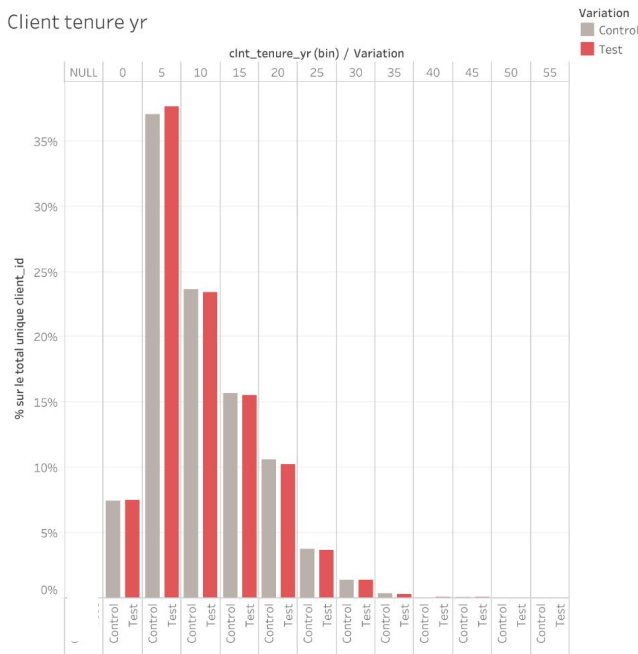
Sample group Control & Test are balanced :

- age wise
- tenure wise
- participants wise
- **UI design will be the only varying factor**

Age Group



Client tenure yr



# Hypothesis formed

$H_1$  New UI design results in higher completion rates

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# H<sub>1</sub>: Conversion rate

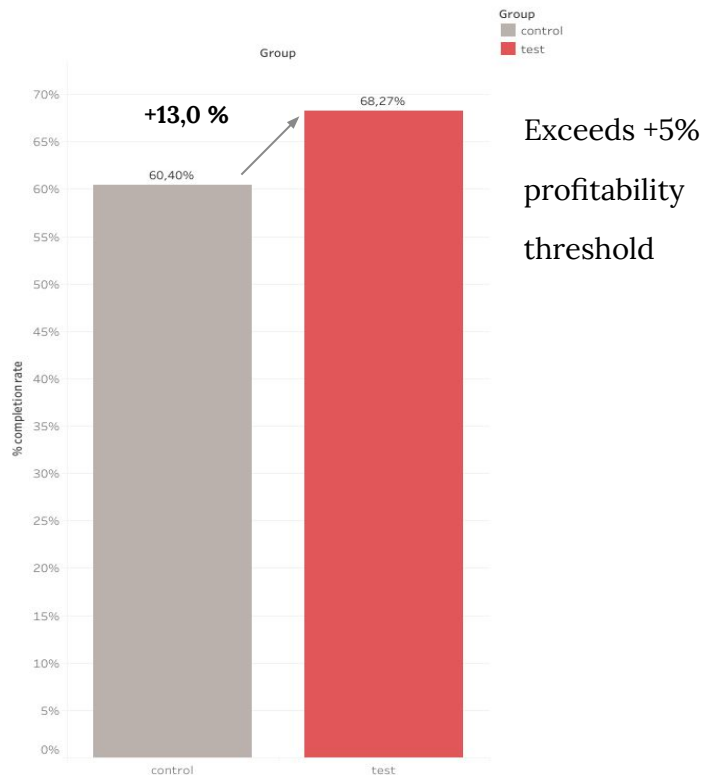
**KPI:**

$$\text{Completion rate} = \frac{\text{Sum completed participants}}{\text{Sum participants at start}}$$

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# H<sub>1</sub>: Conversion rate

## KPI:

$$\text{Completion rate} = \frac{\text{Sum completed participants}}{\text{Sum participants at start}}$$

H<sub>0</sub>: Test group < control group +5%

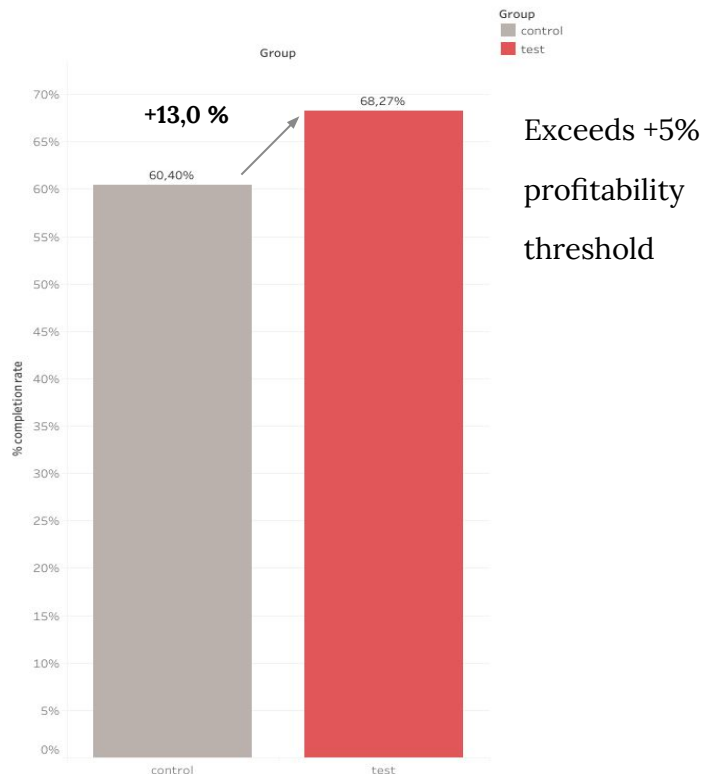
H<sub>1</sub>: Test group > control group +5%

Alpha: 0,05

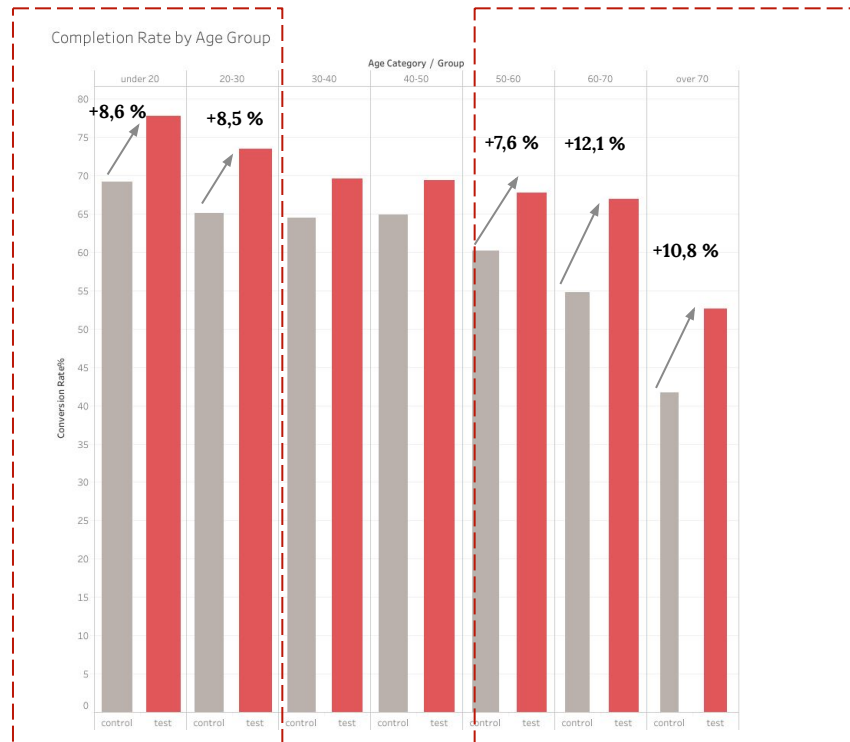
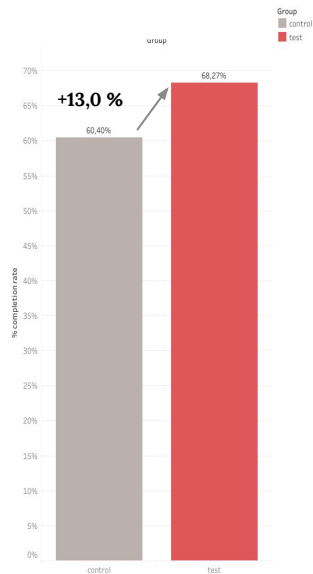
T-statistic: 4,41370

One-sided P-value: 0,00225

Outcome: reject null-hypothesis  
(p. value < 0,05 and t-stat > 0)



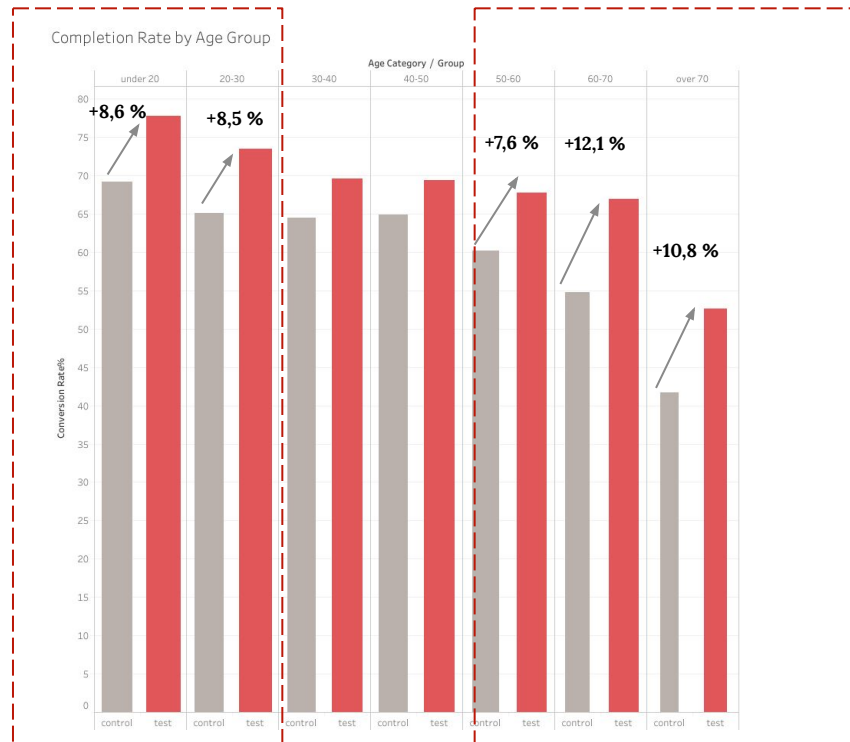
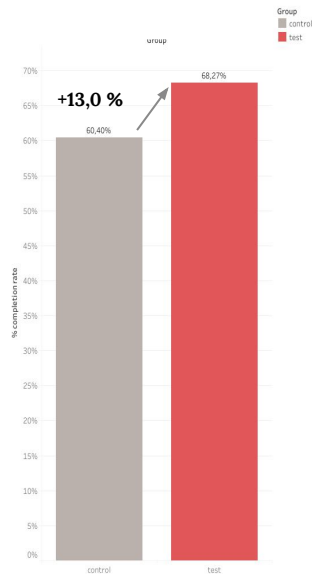
# H<sub>1</sub>: Conversion rate (cont.)





# H<sub>1</sub>: Conversion rate (cont.)

- Youngest and oldest age group onboard most

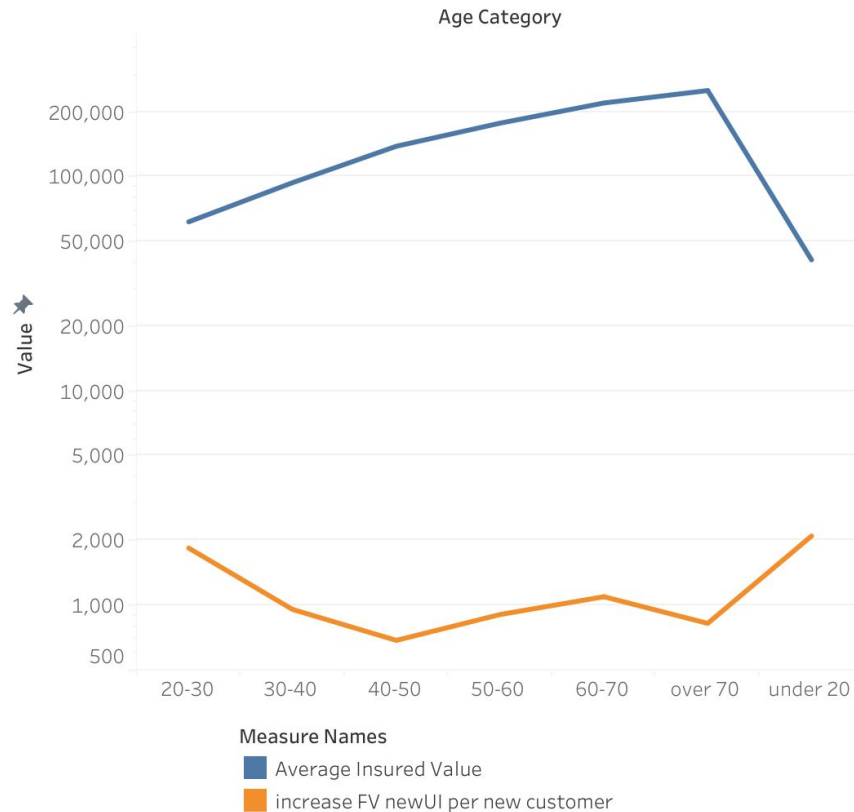


# H<sub>1</sub>: Implied financial impact

## Discounted cash flows

- Considering Future Value of present cash flows: prominent increases in onboarding in the **highest** and **lowest** age-groups resulted in a significant implied financial result.

Increase financial position

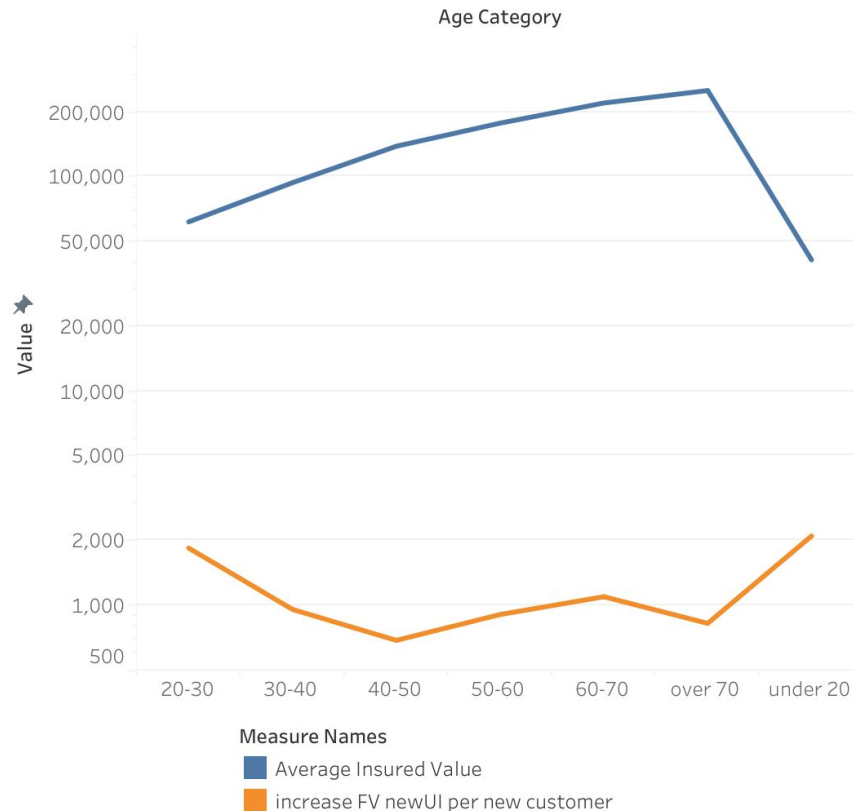


# H<sub>1</sub>: Implied financial impact

## Discounted cash flows

- Considering Future Value of present cash flows: prominent increases in onboarding in the **highest** and **lowest** age-groups resulted in a significant implied financial result.
- Insurance sellers tend to collect longer from your clients than older due to mortality, consequently resulting in a higher future value of cash flows.

Increase financial position



## H<sub>2</sub>: Completion Time

### KPI:

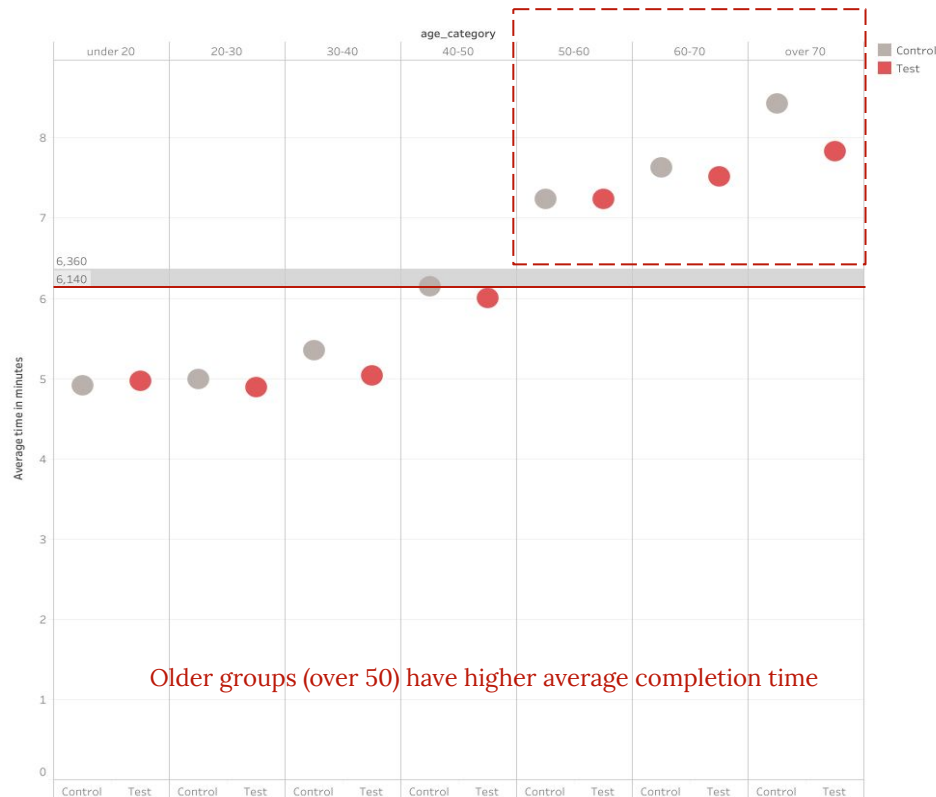
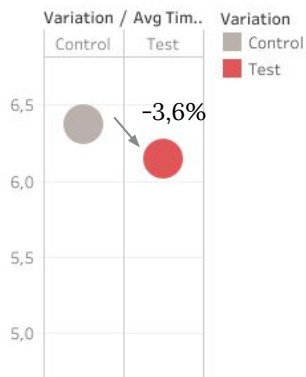
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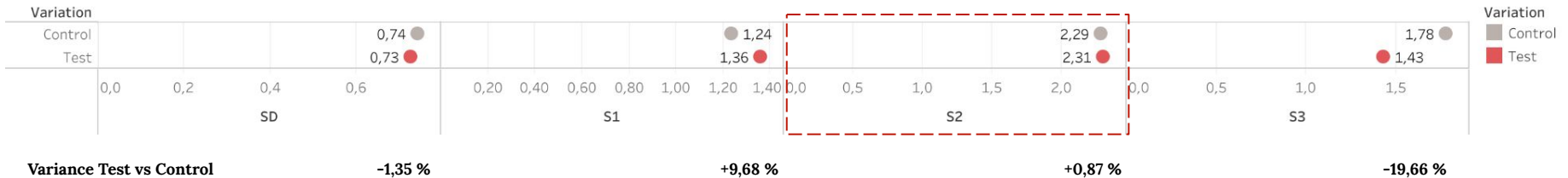
Average  
Completion Time



## H<sub>2</sub>: Completion Time - participants spend most time on step 2

### KPI:

$$\text{Average Completion Time} = \frac{\text{Sum of Duration Time}}{\text{Count of client}}$$



## H<sub>3</sub>: Error rate

**KPI:**

$$\text{Error rate} = \frac{\text{Count of errors}}{\text{Total of participants who started the process}}$$

Error Rate	
Control	31,37%
Test	25,69% ( -22,11 %)

## H<sub>3</sub>: Error rate - Step 2 causes most errors

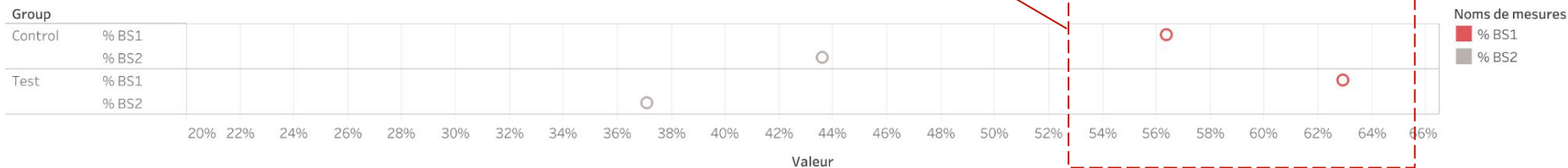
**KPI:**

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Error rate by step





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$H_2$  New UI design results in faster onboarding times

True: test group performed better with 3,6% faster

$H_3$  New UI design results in lower error rates

True: test group reduced errors by 22,11%

# Conclusion / Advice

Our findings indicate that not only did the new UI meet the threshold criteria set by Vanguard :

- It overperformed the metrics substantially;
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Our findings indicate that not only did the new UI meet the threshold criteria set by Vanguard :

- It overperformed the metrics substantially;
- It is therefore our advice to implement the new UI into production.

Onboarding duration time was in general improved, but most of the ground won was with error rates (-22,11%).

Interestingly, the new UI seemed to have appealed to the youngest and oldest participants in both groups, which in turn account for the highest implied revenue. It is key to retain these younger clients since these cash-flows can be reinvested the longest.



# Recommendations

**Onboarding Process  
needs to be faster**

UI developer is  
recommended to still look  
into how to improve UI  
since target of -5% is  
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Step 2 causes more errors  
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## Client retention

Challenge to retain younger clients even if older clients accounts for most value now

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Step 2 causes more errors in the new UI than the old one

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## Client retention

Challenge to retain younger clients even if older clients accounts for most value now

## Next Steps : Qualitative Survey

As the data set was giving no qualitative information on the UI conducting a qualitative analysis on the UI would complete the research

# Thank you for your attention!

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