

# Usability Test Plan

# TRS Usability Testing Plan

## 1. Test Objective

The objective of this usability test is to evaluate how easily users can find information on the TRS website. Specifically, we aim to:

- Measure the **speed to successful task completion** for prioritized tasks.
- Collect **System Usability Scale (SUS) scores** to assess the overall usability.
- Identify areas where users struggle and provide recommendations for improvement.

### Key Success Metrics (KPIs)

1. **Speed to Completion:** Track the time taken by participants to successfully complete each task.
  2. **Task Success Rate:** Measure the percentage of users who complete a task successfully.
  3. **System Usability Scale (SUS) Score:** Obtain a **SUS score of 70 or higher** post-redesign.
  4. **30% Improvement in Speed:** Compare task completion times before and after improvements.
  5. **Error Rate & User Frustration:** Identify usability issues that cause user errors or confusion.
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## 2. Test Participants

### Target Audience

- Participants will represent a **diverse mix of users (ages 20 to 85) from different occupations**.
- A mix of **new and returning** users of the TRS website.
- Participants with **varying levels of tech-savviness** (beginner, intermediate, advanced users).
- User groups
  - Early career
  - Mid-level
  - Pre-retirees/ retired

### 3. Test Methodology

#### Test Session Structure

Each session will be **30-45 minutes long** and follow this structure:

1. **Pre-Test Interview (5 minutes)**
    - Gather demographic information and user background.
    - Ask about their familiarity with the TRS website.
    - Ask about their expectations for finding information on similar websites.
  2. **Task-Based Usability Testing (25-30 minutes)**
    - Participants complete **a series of tasks** while thinking aloud.
    - Observe and record task completion time, errors, and navigation paths.
    - Identify roadblocks, confusion, or areas needing improvement.
  3. **Post-Test Interview & SUS Survey (5-10 minutes)**
    - Gather qualitative feedback on user experience.
    - Ask participants to rate their experience using the **System Usability Scale (SUS)**.
    - Ask about pain points, suggestions, and expectations.
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### 4. Task List & Success Criteria

Each task will be measured using:

- **Completion Rate** (Did the user complete the task?)
- **Time on Task** (How long did it take?)
- **Errors & Confusion Points** (Did they struggle?)
- **Path Taken** (Was navigation intuitive?)

Task	Task Type	Success Criteria	Difficulty
Estimate service retirement benefits	Information Search	User finds the instructions for using the Benefit Calculator.	Very Hard

Find a video on TRS website about Refunding TRS Account	Information Search	User locates the video successfully.	Very Hard
Subscribe to Fresh Picks Newsletter	Interaction	User successfully subscribes to the newsletter.	Very Hard
View TRS-Care Plan Eligibility & Steps to Enroll	Information Search	User finds eligibility criteria and steps for enrollment.	Moderate
Learn about preventive care covered under TRS-ActiveCare	Information Search	User finds relevant preventive care information.	Moderate
Updating address on file with TRS	Information Search	User finds the correct method (form, portal, or contact TRS).	Easy
View Payment Schedule	Information Search	User finds and correctly identifies the payment schedule.	Easy
Register for a Retirement Benefits Presentation	Information Search & Interaction	User finds and registers for a presentation.	Easy
Register for a Health Event	Information Search & Interaction	User successfully follows the link to register.	Easy
Find Information on Reporting the Death of a TRS Member	Information Search	User locates correct information on beneficiary procedures.	Easy
Look for Open Roles in the IT Division at TRS	Information Search	User navigates to the careers page and finds IT roles.	Very Easy
Find Contact Info for TRS Ombuds or a Specific TRS Team	Information Search	User finds relevant contact details.	Very Easy

# Tasks for Old Website

# Tasks

Very Easy (1) -> Very Hard (5)

1. Updating address on file with TRS - 2

Pension Benefits/ Active Members > Keep your info current

[https://www.trs.texas.gov/Pages/pension\\_benefits\\_keep\\_info\\_current.aspx](https://www.trs.texas.gov/Pages/pension_benefits_keep_info_current.aspx)

2. View Payment Schedule - 2

Retirees and Beneficiaries > BENEFITS > Annuity Payment Schedule

[https://www.trs.texas.gov/Pages/active\\_member\\_annuity\\_payment\\_schedule.aspx](https://www.trs.texas.gov/Pages/active_member_annuity_payment_schedule.aspx)

Pension Benefits > RETIREE > Annuity Payment Schedule

3. Estimate service retirement benefits - 5

[https://www.trs.texas.gov/Pages/active\\_member\\_retirement\\_request\\_for\\_estimate.aspx](https://www.trs.texas.gov/Pages/active_member_retirement_request_for_estimate.aspx)

4. Register for a Retirement Benefits Presentation - 2

Active Members > Register for a Retirement Benefits Presentation

[https://www.trs.texas.gov/Pages/active\\_member\\_group\\_presentations\\_counseling\\_sessions.aspx](https://www.trs.texas.gov/Pages/active_member_group_presentations_counseling_sessions.aspx)

5. View TRS-Care Plan Eligibility & Steps to Enroll - 3

Health Care Benefits > TRS-Care Eligibility and Enrollment

[https://www.trs.texas.gov/Pages/healthcare\\_trscare\\_eligibility.aspx](https://www.trs.texas.gov/Pages/healthcare_trscare_eligibility.aspx)

6. Register for a Health Event- 2

Health care benefits > Health Care Events

[https://www.trs.texas.gov/Pages/healthcare\\_benefits\\_events.aspx](https://www.trs.texas.gov/Pages/healthcare_benefits_events.aspx)

7. Learn about preventive care covered under TRS-ActiveCare - 3

Healthcare benefits > Covered preventive care services

[https://www.trs.texas.gov/Pages/healthcare\\_covered\\_preventive\\_care.aspx](https://www.trs.texas.gov/Pages/healthcare_covered_preventive_care.aspx)

Difficulty - Medium

8. Find a video on TRS website about Refunding TRS Account -5

Any navbar item > "Check out our new member education videos" image button

[https://www.trs.texas.gov/Pages/pension\\_benefits\\_members\\_videos.aspx](https://www.trs.texas.gov/Pages/pension_benefits_members_videos.aspx)

Difficulty - Hard (Can be confused easily with Active Members > Refunding Your Member Account)

9. Subscribe to Fresh Picks Newsletter - 5  
About TRS > Connect with Us Online > Newsletters  
<https://www.trs.texas.gov/Pages/subscribe.aspx>  
Difficulty - Hard

10. Find Contact Info for TRS Ombuds or a Specific TRS Team - 1  
Contact Us > TRS Ombuds Office  
<https://www.trs.texas.gov/Pages/ombuds.aspx>  
Difficulty - Easy

11. Look for Open Roles in the IT Division at TRS - 1  
Careers > Current Positions > Division = "IT"  
[https://trs.csod.com/ux/ats/careersite/5/home?c=trs&cfdd\[0\]\[id\]=127&cfdd\[0\]\[options\]\[0\]=98](https://trs.csod.com/ux/ats/careersite/5/home?c=trs&cfdd[0][id]=127&cfdd[0][options][0]=98)  
Difficulty - Easy

12. Find Information on Reporting the Death of a TRS Member - 2  
Retirees and Beneficiaries > Death Benefits and Death Claim Info  
[https://www.trs.texas.gov/Pages/active\\_member\\_death\\_benefits\\_claims.aspx](https://www.trs.texas.gov/Pages/active_member_death_benefits_claims.aspx)  
Difficulty - Medium

Ask Jenny  
Number of tasks  
Wordings and success criteria of tasks - clarity on next steps,

# Tasks for New Website

# Tasks

Very Easy (1) -> Very Hard (5)

1. Updating address on file with TRS - 2

Pension > know your benefits > manager your member account > keep your information current

<https://www.trs.texas.gov/pension-benefits/know-benefits/manage-account/keep-info-current>

2. View Payment Schedule - 2

Pension > retirees resources > annuity payment schedule

<https://www.trs.texas.gov/pension-benefits/retiree-resources/annuity-payment-schedule>

3. Estimate service retirement benefits - 5

Pension > calculators

<https://www.trs.texas.gov/pension-benefits/calculators>

4. Register for a Retirement Benefits Presentation - 2

Pension > Retirement Sessions & Counseling

Learning Resources > Event Calendar > Ready To Retire Presentation

<https://www.trs.texas.gov/pension-benefits/counseling-sessions>

5. Register for a Health Event- 2

Health care benefits > Health Care Events

<https://www.trs.texas.gov/health-benefits/events>

6. Learn about preventive care covered under TRS-ActiveCare - 3

Health > Active Member Health > Learn About Coverage > Benefits At a Glance > Covered Preventive Care

<https://www.trs.texas.gov/health-benefits/active-members/coverage/benefits/preventive-care>

7 Find a video on TRS website about Refunding TRS Account -5

Learning Resources > Featured Videos

<https://www.trs.texas.gov/learning-resources/videos>

8. Find Contact Info for TRS Ombuds or a Specific TRS Team - 1

Home > Contact TRS > TRS Office of Ombuds

<https://www.trs.texas.gov/contact/ombuds>

# Test Script

## I. Greetings and Introduction

Hi <Participant name>, How are you doing today?

Thank you for taking the time to talk to us today!

My name is <Interviewer name> and I'm a graduate student at UT Austin.

-We're also joined by <Observer name>, observer for this session and <Note Taker's Name>, notetaker for this session who are also graduate students at UT Austin.

We'll start with some questions, and then I will give you some tasks to complete on the computer. We'll use the feedback we get from you and other participants to improve on the TRS website, so please share your honest thoughts as we go along.

Do remember, there are **no right or wrong answers!** Do you have any questions for me before we get started?

Before we begin, could I just confirm that you're still okay with this session being recorded\_\_\_\_? [Wait for reply]

Awesome! I will start the recording now.

Thank you!

## II. Pre-task questions

Before we dive into the tasks, we'd love to know a bit about you:

1. Tell me a bit about yourself.
2. Have you used the TRS website before?
  - a. How often do you use it?
  - b. For what purposes do you use it?

## II. Tasks

### Before each task:

I'll read a short scenario, and then you can try to complete the task just like you would on your own. Feel free to talk through what you're doing—we're here to learn from your thought process. Please open the link in the chat : <https://www.trs.texas.gov/>

### Task 1: Find the date of your next annuity payment

Scenario: You want to check when your next annuity payment is scheduled.

Hint: You might start by looking in the Retirees section.

Actual path: Retirees and Beneficiaries > BENEFITS > Annuity Payment Schedule

[https://www.trs.texas.gov/Pages/active\\_member\\_annuity\\_payment\\_schedule.aspx](https://www.trs.texas.gov/Pages/active_member_annuity_payment_schedule.aspx)

Pension Benefits > RETIREE > Annuity Payment Schedule

**Task 2: Estimate your service retirement benefits**

Scenario: You're thinking about retiring and want to get an estimate of your benefits.

[https://www.trs.texas.gov/Pages/active\\_member\\_retirement\\_request\\_for\\_estimate.aspx](https://www.trs.texas.gov/Pages/active_member_retirement_request_for_estimate.aspx)

(Locate information on how to get an estimate of your benefits)

Hint: Look for a calculator, a form, or information on how to request an estimate.

**Task 3: Update your address with TRS**

Scenario: You've recently moved and want to update your address in TRS records.

Hint: Try the homepage options or search for how to update your info.

[Pension Benefits/ Active Members > Keep your info current](#)

[https://www.trs.texas.gov/Pages/pension\\_benefits\\_keep\\_info\\_current.aspx](https://www.trs.texas.gov/Pages/pension_benefits_keep_info_current.aspx)

**Task 4: Register for a retirement benefits presentation**

Scenario: You're preparing to retire and want to attend a session that helps you understand your benefits or how to fill out retirement forms.

Hint: Look for upcoming sessions and how to register.

[Active Members > Register for a Retirement Benefits Presentation](#)

[https://www.trs.texas.gov/Pages/active\\_member\\_group\\_presentations\\_counseling\\_sessions.aspx](https://www.trs.texas.gov/Pages/active_member_group_presentations_counseling_sessions.aspx)

**Task 5: Learn about preventive care covered under TRS-ActiveCare**

Scenario: You're trying to find out which preventive services are covered under your health plan.

Hint: Look in the health care benefits section.

[Healthcare benefits > Covered preventive care services](#)

[https://www.trs.texas.gov/Pages/healthcare\\_covered\\_preventive\\_care.aspx](https://www.trs.texas.gov/Pages/healthcare_covered_preventive_care.aspx)

**Task 6: Register for a health event**

Scenario: You're nearing retirement and want to attend a session like "Retire Healthy with TRS-Care" to learn about your healthcare options.

Hint: See if you can find the event and registration details.

[Health care benefits > Health Care Events](#)

[https://www.trs.texas.gov/Pages/healthcare\\_benefits\\_events.aspx](https://www.trs.texas.gov/Pages/healthcare_benefits_events.aspx)

**Task 7: Find a video about health care terms**

Scenario: Some insurance terms are confusing, and you'd like to watch a video to better understand them.

Hint: Check the TRS video or media section.

Any navbar item > “Check out our new member education videos” image  
button[https://www.trs.texas.gov/Pages/pension\\_benefits\\_members\\_videos.aspx](https://www.trs.texas.gov/Pages/pension_benefits_members_videos.aspx)

### **Task 8: Find contact info for the TRS Ombuds Office**

Scenario: You want to contact the TRS Ombuds Office about a concern.

Hint: Look for a Contact Us section or a dedicated page for Ombuds services.

[Contact Us > TRS Ombuds Office](#)

<https://www.trs.texas.gov/Pages/ombuds.aspx>

## **II. Post-task questions**

Thanks so much—you’re almost done!

<https://forms.gle/epxZV7esPAfxrakc6>

New Test script

## I. Greetings and Introduction

Hi <Participant name>, How are you doing today?

Thank you for taking the time to talk to us today!

My name is <Interviewer name> and I'm a graduate student at UT Austin.

-We're also joined by <Observer name>, observer for this session and <Note Taker's Name>, notetaker for this session who are also graduate students at UT Austin.

We'll start with some questions, and then I will give you some tasks to complete on the computer. We'll use the feedback we get from you and other participants to improve on the TRS website, so please share your honest thoughts as we go along.

Do remember, there are **no right or wrong answers!** Do you have any questions for me before we get started?

Before we begin, could I just confirm that you're still okay with this session being recorded\_\_\_\_? [Wait for reply]

Awesome! I will start the recording now.

Thank you!

## II. Pre-task questions

Before we dive into the tasks, we'd love to know a bit about you:

3. Tell me a bit about yourself.
4. Have you used the TRS website before?
  - a. How often do you use it?
  - b. For what purposes do you use it?

## II. Tasks

### Before each task:

I'll read a short scenario, and then you can try to complete the task just like you would on your own. Feel free to talk through what you're doing—we're here to learn from your thought process. Please open the link in the chat :<https://www.trs.texas.gov/>

### Task 1: Find the date of your next annuity payment

Scenario: You want to check when your next annuity payment is scheduled.

Hint: You might start by looking in the Retirees section.

## **Task 2: Estimate your service retirement benefits**

Scenario: You're thinking about retiring and want to get an estimate of your benefits.

<https://www.trs.texas.gov/pension-benefits/calculators>

(Locate information on how to get an estimate of your benefits)

Hint: Look for a calculator, a form, or information on how to request an estimate.

## **Task 3: Update your address with TRS**

Scenario: You've recently moved and want to update your address in TRS records.

Hint: Try the homepage options or search for how to update your info.

[Pension > know your benefits > manager your member account > keep your information current](#)

<https://www.trs.texas.gov/pension-benefits/know-benefits/manage-account/keep-info-current>

## **Task 4: Register for a retirement benefits presentation**

Scenario: You're preparing to retire and want to attend a session that helps you understand your benefits or how to fill out retirement forms.

Hint: Look for upcoming sessions and how to register.

[Active Members > Register for a Retirement Benefits Presentation](#)

## **Task 5: Learn about preventive care covered under TRS-ActiveCare**

Scenario: You're trying to find out which preventive services are covered under your health plan.

Hint: Look in the health care benefits section.

[Healthcare benefits > Covered preventive care services](#)

## **Task 6: Register for a health event**

Scenario: You're nearing retirement and want to attend a session like "Retire Healthy with TRS-Care" to learn about your healthcare options.

Hint: See if you can find the event and registration details.

[Health care benefits > Health Care Events](#)

## **Task 7: Find a video about health care terms**

Scenario: Some insurance terms are confusing, and you'd like to watch a video to better understand them.

Hint: Check the TRS video or media section.

**Task 8: Find contact info for the TRS Ombuds Office**

Scenario: You want to contact the TRS Ombuds Office about a concern.

Hint: Look for a Contact Us section or a dedicated page for Ombuds services.

[Contact Us > TRS Ombuds Office](#)

**II. Post-task questions**

Thanks so much—you're almost done!

<https://forms.gle/epxZV7esPAfxrakc6>

# Analysis

# Results

## Overview

To evaluate the usability of the redesigned TRS website, we conducted a comparative usability study involving two groups of participants. **Group A (12 participants)** interacted with the original website, while **Group B (10 participants)** tested the new design. Each usability session was **scheduled for 30–45 minutes**, with participants asked to complete a series of common user tasks that tapped three core aspects of usability: effectiveness (task success), efficiency (speed on task) and satisfaction (reported on standard scale, benchmarked to industry norm). Use of three measures reflects the trade-offs in user experience between success, effort, and perception. All users were current TRS members. DO WE HAVE ANY DEMOGRAPHIC INFO?

The redesigned (new) TRS website showed **strong improvements across all key success metrics**. Participants completed tasks faster and more consistently on the new website compared to the old version, with especially **large time savings on more complex tasks**. Task success rates also improved, with a higher percentage of users able to complete important actions without assistance. **System Usability Scale (SUS) scores were largely positive**, meeting a target benchmark of 70, signaling a significantly better user experience. The redesigned site also led to fewer critical errors and less user frustration, reinforcing that the new navigation structure and task flows were more intuitive and aligned with users' mental models.

In sum, while **Group A (old interface) generally used the full allotted time and experienced challenges in completion**, participants in **Group B (new interface) completed the evaluation**, often within just 15–20 minutes, indicating improved task efficiency and overall flow in the new version.

## Key User Experience Metrics

### Speed to Completion:

→ Participants finished 7 of 8 tasks **faster** on the new website compared to the old one. Overall, 4/8 tasks were 50% faster on the new site than the old one. Only one task, (#5, Learning about preventive care) showed no improvement on the new site. This may be a site issue in need of further attention

### 46% Improvement in Average Speed:

→ We considered 30% efficiency improvements (total task times on new compared to old interface) to be a desirable benchmark target for the new site. The redesigned site exceeded

this with improvements of 46% on average. Considerable variation across tasks was observed with one task (e.g., registering for a health event) resulting in speed improvements of over 80%.

**Task Success Rate:**

→ **Higher task success rates** were observed, with more participants able to complete tasks without getting stuck or making critical errors. The task success rate, defined as the ability of the user to find the right location/information, increased from 81.25% for A (older website) to 93.75% for B (new website).

**Error Rate & User Frustration:**

→ Participants **made fewer errors** and showed **lower signs of frustration** on the redesigned site, suggesting a smoother, more user-friendly experience.

**System Usability Scale (SUS) Score:**

→ SUS provides a widely recognized measure of user satisfaction based on perceptions of ease of use. The scale reports scores on a 0-100 scale, with average consumer interfaces scoring around 68. The original design's SUS score was 53.125, suggesting a poor level of satisfaction. The new design received a **much improved SUS score of 79.5**, suggesting users have a better than average experience with the new TRS site.

**Summary** – new site was 12.5% more effective, 46% more efficient, and rated 24 pts higher on satisfaction.

Any other general observations on specific tasks, sources of frustration, particular positive comments?

# 1. Time on Task

## Repeated Measures ANOVA Results

### Results ▾

#### Repeated Measures ANOVA

##### Within Subjects Effects

Cases	Sum of Squares	df	Mean Square	F	p	$\omega^2$
Tasks	39074.382 <sup>a</sup>	7 <sup>a</sup>	5582.055 <sup>a</sup>	3.449 <sup>a</sup>	0.004 <sup>a</sup>	0.200
Tasks * Group	8851.104 <sup>a</sup>	7 <sup>a</sup>	1264.443 <sup>a</sup>	0.781 <sup>a</sup>	0.606 <sup>a</sup>	0.000
Residuals	79309.146	49	1618.554			

Note. Type III Sum of Squares

<sup>a</sup> Mauchly's test of sphericity indicates that the assumption of sphericity is violated ( $p < .05$ ).

##### Between Subjects Effects

Cases	Sum of Squares	df	Mean Square	F	p	$\omega^2$
Group	12637.507	1	12637.507	4.909	0.062	0.196
Residuals	18019.354	7	2574.193			

Note. Type III Sum of Squares

- Over the full task set, users were **faster** when completing tasks on the **new TRS website** compared to the old one.
- **Most tasks** showed a **clear efficiency increase on the new site**, meaning users could **find information or complete actions more quickly**.
- For specific tasks such as **finding the payment schedule, updating address, and signing up for newsletters**, users were more than 50% faster on the new site.
- **Consistency also improved** – on the new website, users had **more similar times** (20-30 seconds) across the board, which means the site was **easier and more predictable** for different users.
- Although our statistics showed that the overall time difference wasn't "significant" (because of the small number of participants), the **trend was very clear**:  
→ **The new website made completing important tasks quicker, easier, and less frustrating**.

## Descriptive Statistics by Task and Group

- We broke down the average task time for each task by website version.
- For 7/8 tasks, the new website either matched or beat the old website in terms of speed.
- Noticeably large improvements in task speed were seen in:
  - Task 2: 117s on old → 46s on new
  - Task 6: 55s on old → 9s on new
  - Task 8: 52s on old → 11s on new
- These improvements mean that the redesign worked far better for information-seeking tasks that were difficult to complete on the old site.

### Descriptives

#### *Descriptives*

Tasks	Group	N	Mean	SD	SE	Coefficient of variation
1	New	6	32.833	33.719	13.766	1.027
	Old	3	45.667	8.622	4.978	0.189
2	New	6	46.000	28.348	11.573	0.616
	Old	3	117.000	68.432	39.509	0.585
3	New	6	61.833	37.108	15.149	0.600
	Old	3	85.667	60.666	35.025	0.708
4	New	6	35.667	32.745	13.368	0.918
	Old	3	48.667	66.973	38.667	1.376
5	New	6	105.000	68.375	27.914	0.651
	Old	3	93.333	87.180	50.333	0.934
6	New	6	8.667	6.121	2.499	0.706
	Old	3	55.333	16.010	9.244	0.289
7	New	6	21.333	15.267	6.233	0.716
	Old	3	49.000	53.226	30.730	1.086
8	New	6	10.833	10.926	4.460	1.009
	Old	3	52.333	37.608	21.713	0.719

### Summary Stats Table

This summarizes how long each group took per task, with stats like min, max, and standard deviation.

- Across all tasks, the average time was lower on the new website.
- The standard deviation (how much user times varied) was also lower in most cases. That means the new site made things easier and more consistent for everyone – not

just faster, but also more predictable.

- The minimum times were often lower on the new site, and the maximum times weren't as extreme, showing that fewer people got stuck or confused.

## Task Completion Time on Old vs New Website

### Descriptive Statistics

Descriptive Statistics

	T1		T2		T3		T4		T5		T6		T7		T8	
	New	Old	New	Old	New	Old	New	Old	New	Old	New	Old	New	Old	New	Old
Valid	7	11	10	7	9	11	10	12	9	10	10	10	10	7	10	10
Missing	3	1	0	5	1	1	0	0	1	2	0	2	0	5	0	2
Mean	29.143	46.455	35.900	105.714	63.778	81.364	35.000	52.083	99.111	90.600	9.100	56.500	18.700	92.143	18.200	42.000
Std. Deviation	32.293	46.505	29.103	53.534	38.771	60.982	36.175	45.360	59.079	80.029	6.064	34.161	12.437	61.426	23.780	20.817
Minimum	2.000	12.000	2.000	43.000	10.000	10.000	6.000	10.000	39.000	31.000	2.000	12.000	8.000	12.000	2.000	23.000
Maximum	76.000	181.000	73.000	178.000	103.000	181.000	103.000	147.000	230.000	270.000	18.000	118.000	44.000	173.000	80.000	95.000

Note. Excluded 1 rows from the analysis that correspond to the missing values of the split-by variable Group

- Across almost all tasks, users were consistently faster on the new website.
- Task 2 and Task 7 show especially large improvements – time was cut in half or more on the new site. This suggests the redesigned interface made the task simpler by reducing number of content levels/clicks required from >4 to 2.
- On the old website, some tasks (like Task 2 and Task7) took well over 90 to 120 seconds, while the same tasks on the new site took far less time.
- The bars on the new website chart are noticeably lower, showing that the redesign helped people complete tasks quicker and with less frustration.
- The time gap is biggest on the more complex tasks, suggesting the redesign was especially helpful where users previously struggled.

Are there any quotes from users that you could provide as color or additional info on any part of their experience on these sites? Thanks

## Appendix

### [1. Test Notes and Analysis](#)



Tab 7

## Overview

To evaluate the usability of the redesigned TRS website, we conducted a comparative usability study involving two groups of participants. **Group A (12 participants)** interacted with the original website, while **Group B (10 participants)** tested the new design. Participants in each group were a mix of ages, most were currently employed, and the majority reported more than 10 years experience of the TRS site.

Each usability session was **scheduled for 30–45 minutes**, with participants asked to complete a series of common tasks. Data collection aimed to capture three core aspects of usability: effectiveness (operationalized as task success), efficiency (measured as speed on task) and satisfaction (reported on a standardized scale, benchmarked to industry norms). Use of three measures reflects the trade-offs in user experience between outcome, effort, and attitude.

Our evaluation indicates the new TRS website design led to **strong improvements across all key success metrics**. User success rates improved, with a higher percentage of users able to complete important actions without assistance on the new design. Furthermore, users typically completed tasks faster and more consistently on the new website with notable **large time savings on more complex tasks**. Satisfaction ratings were significantly better with the new website, exceeding industry benchmarks. Impressionistic data from free-form comments suggest the redesigned site also led to less user frustration, easier navigation and more intuitive task flow.

### Main Findings:

The new website was **12.5% more effective, 46% more efficient**, and **rated 24 pts higher** on satisfaction.

## User Experience Metrics

### Effectiveness

For purposes of this evaluation, task success was assessed as the ability of the user to find the right location/information. If they were unable to find the desired information after three minutes, or expressed a desire to stop before this, the task was deemed incomplete. Summary completion rates for both groups on each task are presented in Table 1.

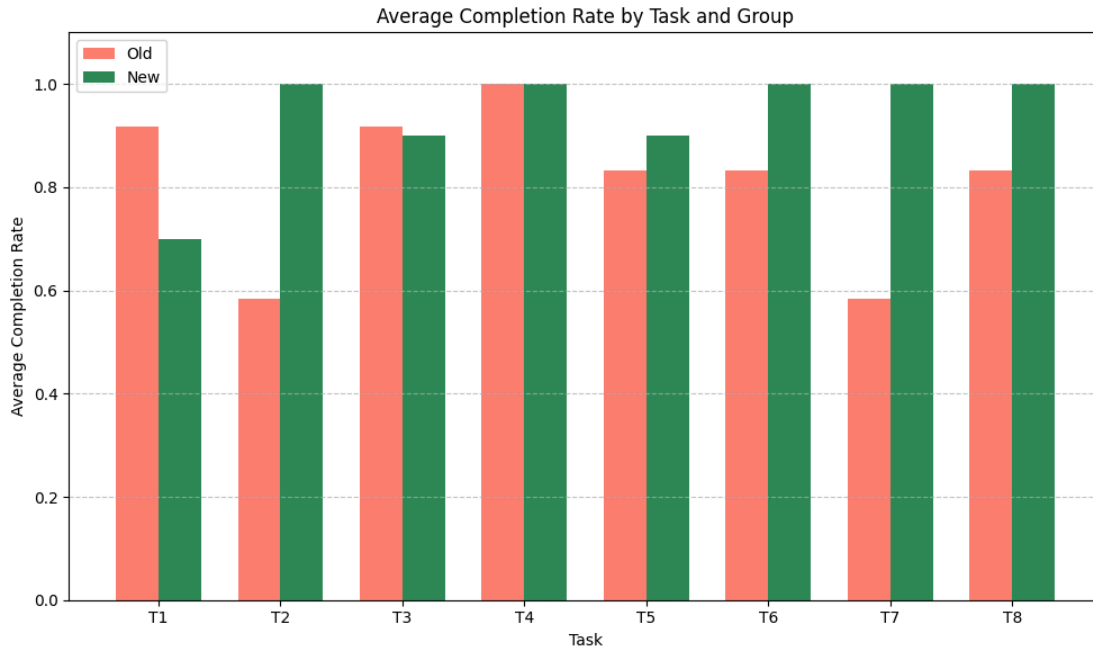


Table 1. Average task completion rates for old (Group A) and new (Group B) design.

For the old design, average completion rates across all tasks was 82%, compared to 95% for the new design, a clear indication of the new design resulting in improved effectiveness.

With the old interface, all users successfully completed only one task (Task 4, Register for a Retirement Benefits Presentation). This suggests the original design was ineffective for some users across many typical tasks. In comparison, all users of the new interface successfully completed 5 of the 8 tasks, with only one or two users failing to complete Task 1 (Find the date of next annuity payment), Task 3 (Update your address) and Task 5 (Learn about preventative care). These areas of the new design might warrant attention for further improvement.

Task 2 (Estimate benefits), and Task 7 (Find a video) showed the largest differences between designs (58% completion for the old interface, 100% completion for the new) confirming major improvements in effectiveness were achieved for those sections of the new design.

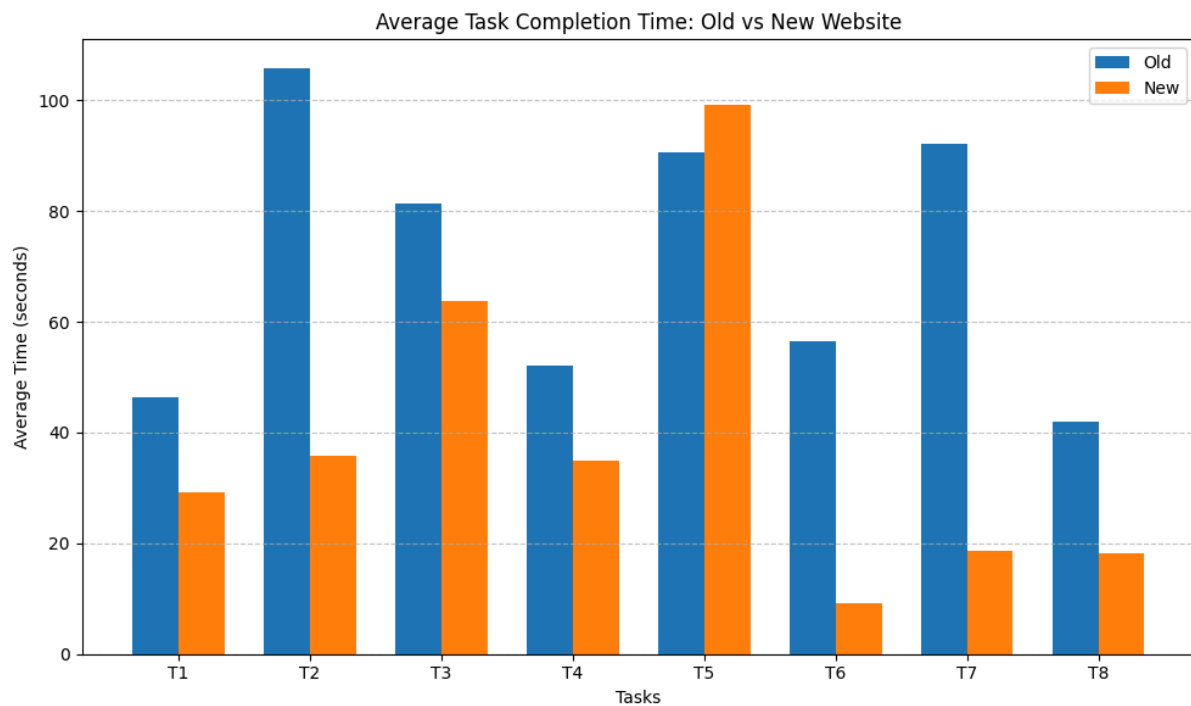
### Error Rate & User Frustration

→ Participants **made fewer errors** and showed **lower signs of frustration** on the redesigned site, suggesting a smoother, more user-friendly experience. It is worth noting that despite being informed that they would not be required to login to complete the tasks, many users expressed the need to do so in order to complete a task.

### Efficiency

For purposes of this evaluation, efficiency was operationalized as time on task, with lower time to completion considered evidence of better user experience. Note, the total time allowed for any task was three minutes after which it was deemed 'incomplete' so this places an upper boundary on the possible time for any task.

Participants finished 7 of 8 tasks faster on the new website compared to the old one. Taken as a whole, users of the new interface were 46% faster (more efficient) than users of the original design. In half the tasks, the new design resulted in completion times that were at least 50% faster, with Task 6 (Register for a health event) being completed 80% faster on the new design. Summary average completion times per task for each design are presented in Table 2 below.



Only one task, (#5, Learning about preventive care) showed no improvement on the new site. Again, this may be a design issue in need of further attention. In sum, the new design represents a substantial improvement in efficiency for most users.

## Satisfaction

For the present evaluation, we estimated user satisfaction with the System Usability Scale (SUS), a widely recognized measure of users' perceptions of ease of use. This tool consists of a 10 item, 5 point Likert-scale survey that asks users to rate the complexity, consistency or

difficulty of an interface, and to estimate their own confidence in using a site or product successfully. All users completed a SUS immediately after completing the tasks.

SUS is an industry standard tool with a long-record of use which has enabled UX evaluators to establish a benchmark for satisfaction. Responses are converted to a final score on a 0-100 scale, with a higher score considered more desirable. To this end, we know that average consumer interfaces score 68, thus any interface can be assessed in comparison to this to provide a broader interpretation of the satisfaction score obtained. Summary scores, including upper/lower confidence intervals, for each interface are presented in Table 3 below.

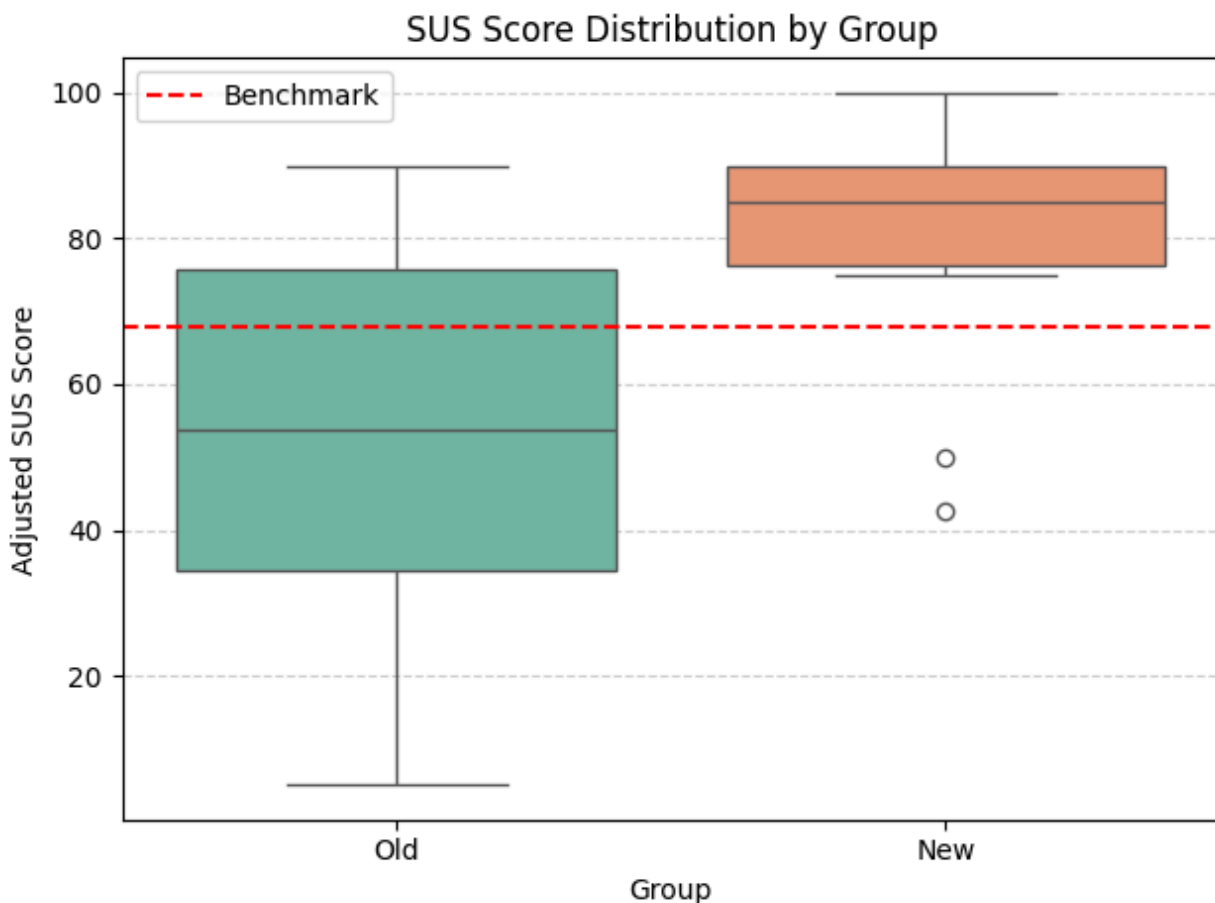


Table 3. Summary SUS response for old and new interfaces.

The original design's SUS score was 53.13, suggesting a poor level of satisfaction, well below the average for consumer interfaces. The new design received a much improved SUS score of 79.5, suggesting not only that users were far more satisfied with the new design, but they rate it more satisfying than average. Though conversion of SUS scores to grades or percentiles is not

agreed upon in the UX field, informal mappings would characterize the redesign as moving the UX of the TRS site from a grade of D to an A-.

## **General impressions**

As well as the measures reported above, participants' verbal comments and physical behavior was recorded during the test sessions, providing the evaluators with impressionistic data on the users' experiences, particularly for points of friction, where the task flow is disrupted negatively. Below are some comments from users in each group.

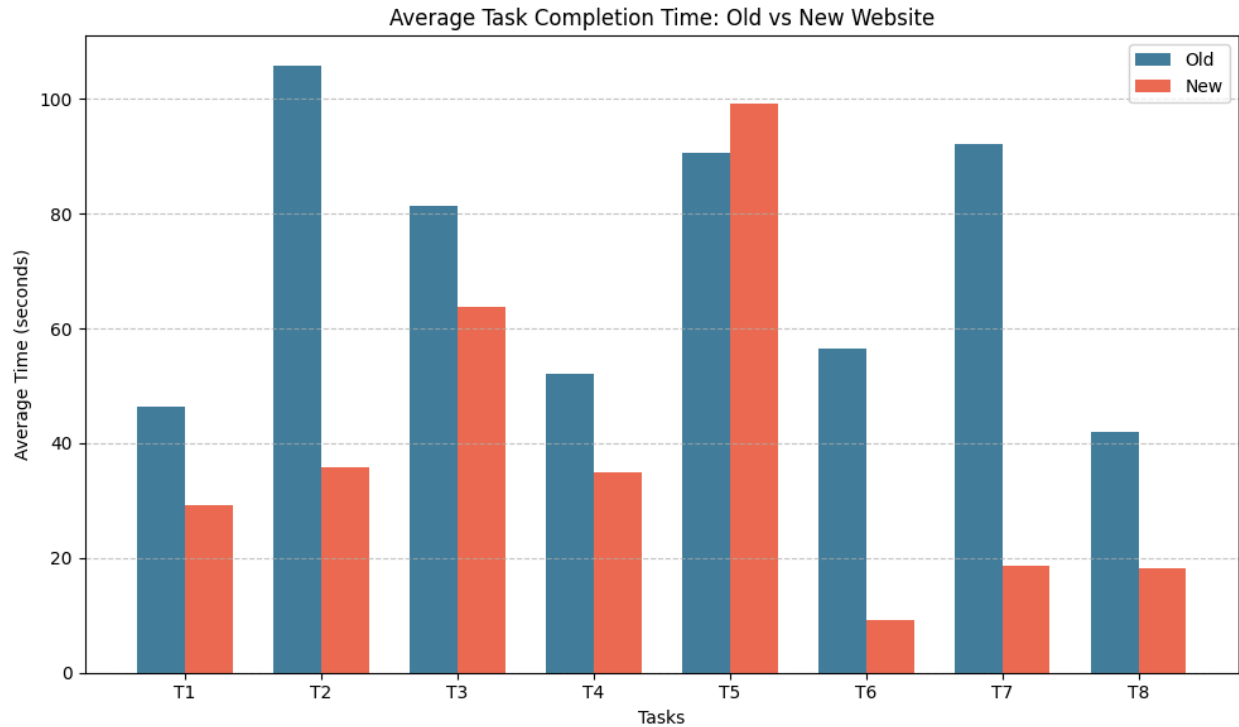
The search function on the old design gave many users problems. As participant A6 put it: "I typed exactly what I wanted in search and it gave me nothing useful", while participant A3 said of the results: "This is way too much information to search through." In contrast, there were no negative comments about the search function among participants using the new interface.

In terms of navigating the site to locate information, we heard comments such as "I'm just clicking around hoping I'll land on the right page." (participant A7) or "The terms are all confusing, I'm not even sure I'm looking in the right place" (participant A10) which indicate considerable friction in use which is negative to users. In contrast, the improvements in navigation were noted by users of the new interface: "This was easy. I knew it would be under the Health section," (participant B7) or "Oh, the annuity payment is right upfront on the homepage – isn't this what we were looking for?" (participant B1).

Functionality was not always obvious to some users e.g., one user of the old interface did not recognize what they were viewing had a play button on a video, remarking "Oh... that was a button? I thought it was just an image." (participant A1). Again, this type of comment was not observed with the new design suggesting clear improvement for this type of user.

However, it is worth noting there may be some 'unlearning' involved for experienced users when it comes to the new site. Once users have invested time and effort gaining familiarity with a design, there can be a cognitive cost in shifting. As one participant in the new group said: "I kind of liked the older navigation, maybe just because I was used to it. This is my first time on the new site, but I think I'd like it better once I get used to it." (participant B3)

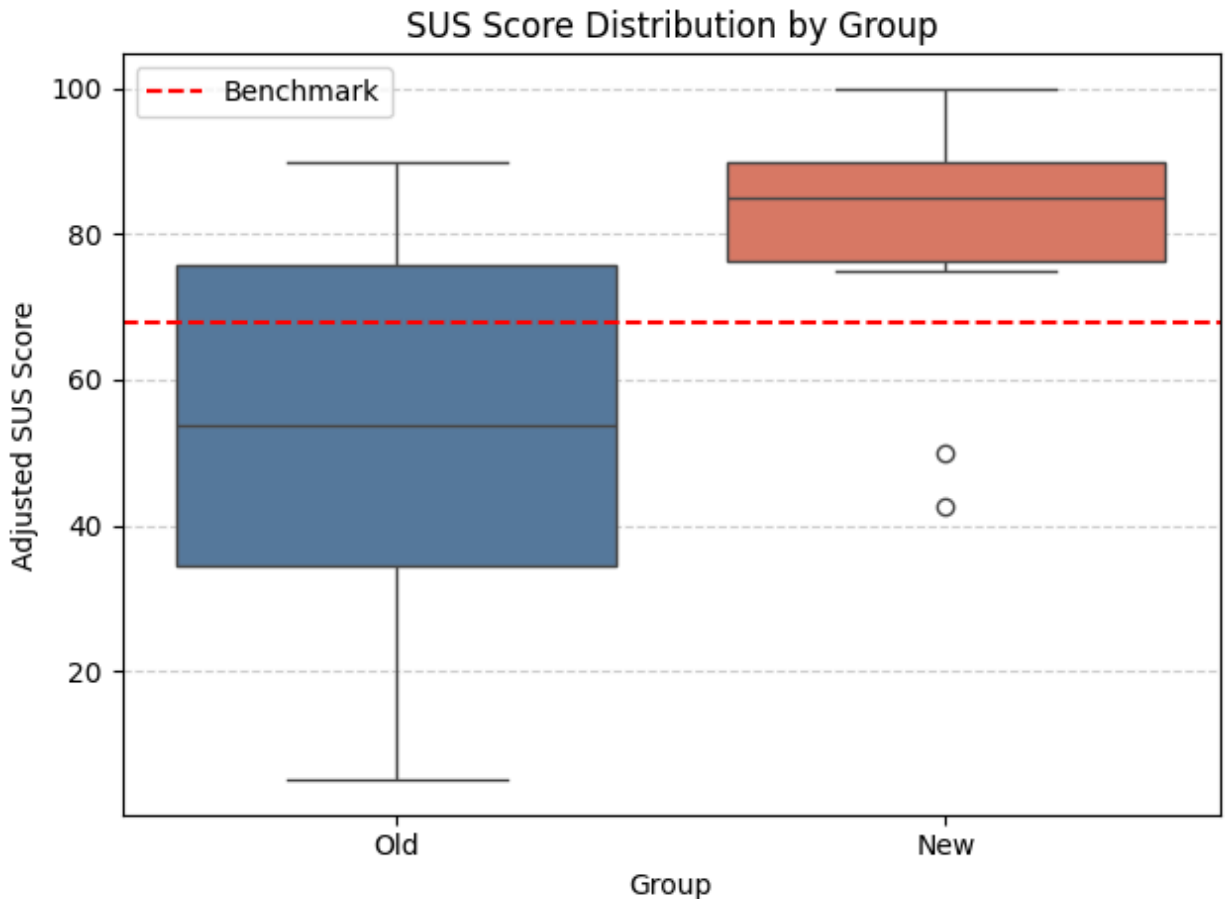
## Time on Task



### Summary

The new TRS website **improved both the speed and consistency of task completion**. Users were able to complete tasks faster, with fewer clicks, and experienced a smoother, more predictable flow. Overall, the redesign made the site easier to navigate and more efficient for a wide range of tasks.

SUS



#### Old Website

- Average Adjusted SUS Score: 53.1
- **Old website scores varied widely**, with several participants scoring well below the industry benchmark of 68.
- The low ratings suggest users found the old site harder to use, possibly due to outdated design or poor navigation.

#### New Website

- Average Adjusted SUS Score: 79.5
- **New website scores clustered above 80**, with many hitting 90–100, indicating high satisfaction.
- Users found the new site easier and more satisfying to use, suggesting the redesign improved the overall experience. The SUS distribution supports the **observed improvements in efficiency and task success**.

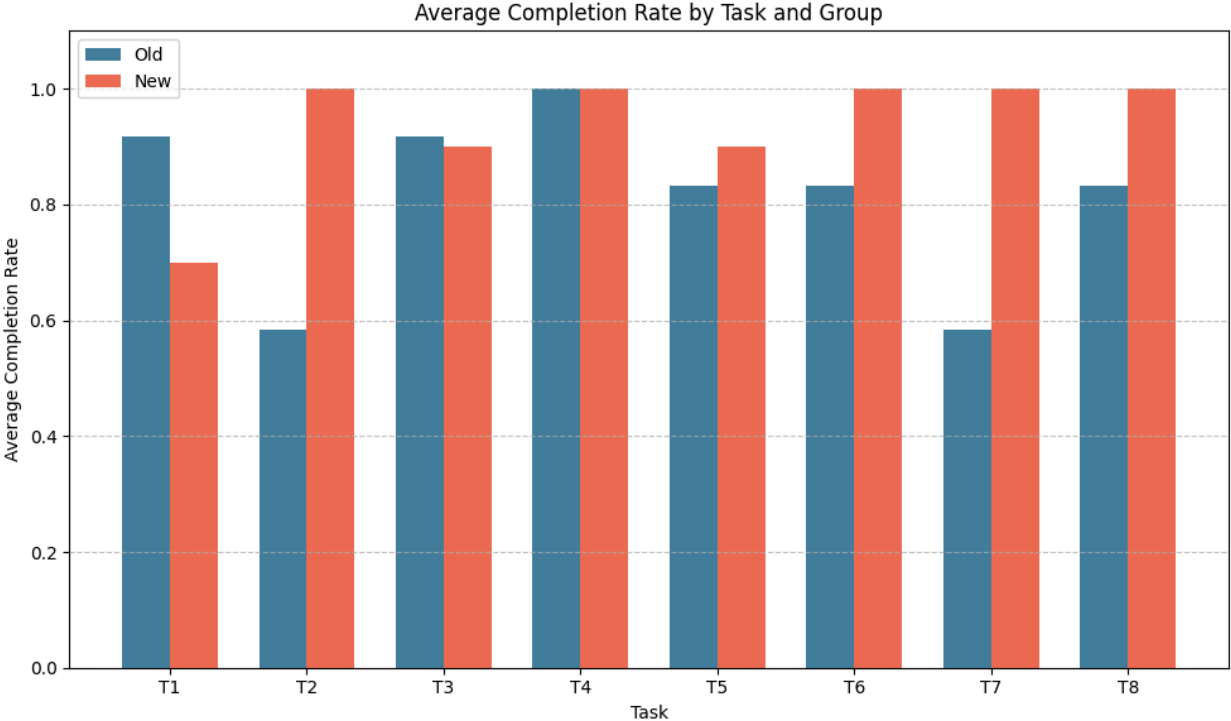
#### Summary

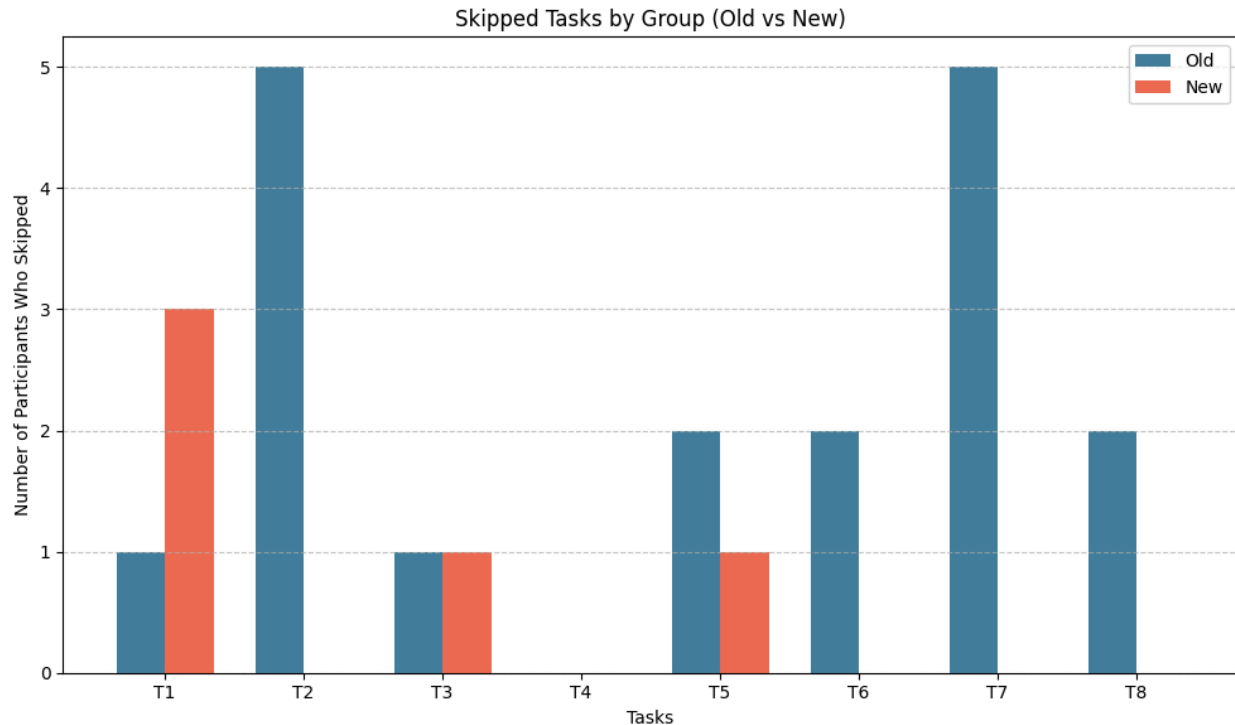
The SUS scores clearly favour the new TRS website, showing that the redesign significantly enhanced usability. While the old version fell short of usability standards, the new interface was

well-received and rated highly, reinforcing that the improvements made a meaningful difference in user experience.

### Completion Rate

Explain what we mean by 'completion' e.g., tasks were deemed complete when user arrived at target screen, and were incomplete if user gave up or expressed desire to stop??





## Summary

The new TRS website showed a clear improvement in task success across the board. Users were more likely to complete tasks successfully and consistently. The redesign not only fixed problem areas (like Tasks 2 and 7) but also raised the overall reliability of the site for all tasks. This reflects strong gains in both usability and user confidence.

## Overall Insights

From the data analysis and cross-analyzing the metrics together, we can draw the following insights:

- **High SUS scores aligned with improvements in both time and completion rate**, validating the effectiveness of the redesign.
- **T2 is a standout success**: faster, fully completed, and highly rated with the new design – it was previously one of the most skipped.
- **T5 demonstrates a valuable trade-off**: more time spent, but near-perfect completion and reduced confusion – users appeared willing to persist when the experience is clearer.
- Tasks that had **lower completion and higher skips in the old site (T6, T7, T8)** were noticeably improved in the new version, both in time and success.
- The **redesign not only optimized efficiency but also reduced user frustration**, as seen in skipped task reduction and higher SUS ratings.

## LEFTOVERS

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### Old Website

- Average completion rate across tasks: ~0.82 (or **82%**)
- Lowest performance on Task 2 and Task 7 (58.3%), suggesting these tasks were confusing or difficult to complete with the old interface.
- Most other tasks had solid completion rates ( $\geq 83\%$ ), but the inconsistency (Average SD = 50.35) indicates some usability friction.
- **Old site had high dropout/skipped rates** on T2, T6, T7, and T8 – especially notable for T2 (0.58 → 1.0).

### New Website

- Average completion rate across tasks: ~0.95 (or **95%**)
- The **new website achieved 100% completion** on many tasks, including T2, T4, T6–T8.
- Even the lowest completion (Task 1 at 70%) outperformed the weakest tasks on the old site.

### Old Website

Users took an average of 70s per task with an average completion rate of 81% on most tasks.

- Tasks like finding the payment schedule and finding videos took **over 90 seconds**, and some users got stuck.
- There was also **more variation** in user times – indicating the old design was problematic for some users.

### New Website

Tasks were completed **faster and more consistently**.

The biggest improvements were seen in:

- Task 2 (Estimate your service retirement benefits): 106s → 36s
- Task 6 (Register for a health event): 57s → 9s
- Task 7 (Find educational video): 92s → 19s

Users were less frustrated and got through flows quicker with fewer clicks. **T5 was the only task that took longer** on the new site, possibly due to added steps or more in-depth guidance.

increased from 81.25% for A (older website) to 93.75% for B (new website).