



CPUX-UT Usability Test Report Example

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Introduction

This usability test report is an example of how to document the findings of a **qualitative** usability test. It is intended to help usability testers to produce better usability test reports.

Boxes with a yellow background – like this box – contain **comments** to the usability test report provided by the authors. Such comments are not included in a regular usability test report.

The comments include **rules of thumb and recommendations**, for example with regard to how many findings should be included. The rules of thumb are based on the authors' extensive experience and have been checked by other usability professionals.

This usability test report fulfills many of the requirements in the draft version of the standard **ISO/IEC DIS 25066** – *Common Industry Format for Usability Evaluation Reports* dated September 2014. This usability test report by far does not include examples of all requirements in the ISO 25066 standard. It uses terms that are defined in the *CPUX-F Curriculum and Glossary* and the *CPUX-UT Curriculum*. These curricula are available free of charge at <http://www.uxqb.org/>.

This usability test report does not provide guidance about how to conduct a usability test. It is based on the mainstream approach to usability testing described in the *CPUX-UT Curriculum*. It does not discuss whether this approach is optimal.

This report describes the most important findings of a **usability test of the US website U-Haul.com**, which rents trucks and vans for moving in the US. The usability test was part of the CUE-9 study, in which 35 professionals independently and simultaneously evaluated the U-Haul website based on videos of 5 usability test sessions. The videos are available from the first author.

The authors believe that U-Haul's website contains typical and instructive examples of usability problems. A U-Haul employee participated in the organization of the usability test.

The Usability of a Usability Test Report

A usability test report should be usable. Among other things, this means:

- **Short and to the point.** Report an appropriate number of findings, independent of the extent of the usability test. It can be harmful to report all findings.
Rule of thumb: Report at most 50 findings.
- **Positive findings.** A reasonable number of the reported findings should be positive – that is, describe features that test participants liked.
Rule of thumb: At least 25% of the reported findings should be positive.
- **Executive summary.** For readers who are in a hurry, for example managers. At most one page. Place it right at the start of the usability test report so it's easy to locate.
- **Consistent.** All usability test reports from one organization should have the same format and layout.
- **Comprehensible.** Avoid or explain usability slang such as “Affordance”, “Mental model”, and “WCAG”.

Inappropriate Content in a Usability Test Report

The following Content does not belong in a usability test report:

- An explanation of what “usability” is.
- An explanation of the user-centered design process.
- Details about recruiting, for example the recruitment screener and a copy of the invitation sent to test participants.
- Transcripts – that is, verbatim reproduction of all what one or more test participants said during a usability test session.

Executive summary

The running version of www.U-Haul.com has been usability tested in March 2011 with 5 members of the target group. The test method was the “think aloud” method, where typical users (test participants) carry out tasks while being observed. Usability test sessions were unattended. Videos of the usability test sessions were analyzed by usability professionals after the test.

The primary purpose of the usability test was to carry out an exemplary usability test to be used for a scientific study. A secondary purpose was to determine usability strengths and weaknesses of the U-Haul website.

This usability test report describes findings and recommendations from the test.

Main positive findings for U-Haul.com:

- **Test participants easily realized how truck price depends on truck size**
- **The website preserves the contents of the shopping cart well**
Test participants never lost an item in the shopping cart. On some comparable websites, there is a timeout that clears the shopping cart and asks participants to start over. If a timeout limit exists on this website, none of our test participants encountered it.

Main improvement areas for U-Haul.com:

- **Catastrophic Problem:**
Adequate liability coverage included only in Super Safemove
No participant realized that Safemove only includes limited liability insurance. None of the participants even for a moment considered Super Safemove, which includes adequate liability coverage. No participant was aware of the considerable financial risk they were running if they caused a major accident while they were covered only by Safemove.
- **Users can rent trucks without being asked about damage coverage**
Several participants rented a truck without ever seeing the *Damage protection* page. Their rental by default included no damage coverage, and the website did not ask them to make a choice.
- **Taxes, fees and total price are not shown**
Participants wanted to know the full price of the rental. The website only shows what users must pay in the store excluding taxes and fees. Participants were displeased that they could not see the total price in the shopping cart. They were even more displeased when they found out that they could not even see the total price on the checkout page.

Executive Summary

The target audience for the executive summary is managers.

The executive summary is placed at the beginning of the usability test report in order to make it easy and quick to locate. It should be placed before the table of contents. It does not exceed one page so it can be read quickly by people who are in a hurry.

The executive summary should focus on points that are crucial for a decision maker:

- A brief description of the object of evaluation
- A brief description of the purpose of the evaluation
- A brief description of the evaluation method
- The 2-4 most important positive findings and the 2-4 most important usability problems
- General recommendations based on the findings, for example improved quality assurance (optional).

List the positive findings first in order to provide a smooth introduction to the usability test report. Describe all findings that are mentioned in the executive summary in more detail in the *Findings* section.

Structure

Place the most important sections (*Executive summary* and *Findings*) at the beginning of the usability test report in order to increase the usability of the usability test report.

Place sections of less importance, for example the *Description of the Object of Evaluation*, *Purpose of the Evaluation*, *Evaluation Method* and *Usability Test Script* at the end of the usability test report even though chronologically they belong before the findings.

This may seem illogical but it matches the requirements of the primary users of the usability test report, who are busy managers and stakeholders responsible for correcting usability problems.

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Grouping Findings

Group findings into sections in order to provide a better overview and help readers in correcting the problems. Useful groupings are:

- Affected pages or functions within the tested product
- General problem categories like *Shopping experience* and *Wording and text*

Groupings according to usability test session or test task are unusable. Such groupings are related to the test structure and the test scenario. They are of little interest to the readers of the usability test report.

Within a section, sort findings according to rating and content:

- List catastrophic problems first.
- Findings that relate to the same page or function belong together.
- Place positive findings before problem findings.
- After the previous rules have been satisfied, list findings in the order
Critical problems > Serious problems > Minor problems > Good ideas

Number of Reported Findings

The quality of a usability test report is not proportional to the number of reported findings. On the contrary, it is important that usability testers prioritize findings and only report the essential ones, independent of the extent of the usability test.

Rule of thumb: Report at most 50 findings – otherwise the usability of the usability test report will suffer. The recommended number of findings is 5-25.

There is an important exception to this rule of thumb: All catastrophic and critical usability problems must be reported, even if this means that the total number of reported findings will exceed 50. Of course, this happens very rarely.








Moderator Observations

Sometimes the moderator, the note-taker or an observer notice a usability problem during a usability test, but no test participant encounters the usability problem. Such problems should be reported, but they should be clearly designated as *Moderator observation*.

This usability test report does not contain any examples of such usability problems.

1. Legend

In the descriptions of findings the following ratings are used:

	Positive finding	Works well. This approach is recommendable.
	Minor problem	Minor dissatisfaction; noticeable delays; or superficial difficulties
	Major problem	Substantial delays; or moderate dissatisfaction
	Critical problem	Test participants gave up – showstopper; substantial dissatisfaction; or minor financial damage to user.
	Catastrophic problem	Existential threat. Potentially life-threatening; or bodily harm; or substantial financial damage.
	Good idea	A suggestion from a test participant or from the moderator that could lead to a significant improvement of the user experience.
	Functional problem	Bug. The product does not work as specified.

Conventions used in this usability test report

This usability test report contains several quotes from test participants. The quotes are surrounded by "...", for example

" 'Due today' is \$30.45. Where are they getting that from? It would be nice if they told me what this was like, what fees are being included here"

Test participant profiles and test tasks can be found in Section 10, Usability test script.

Rating Findings

There is no commonly agreed way of rating findings. There is little agreement on the number, naming and definition of ratings and how to represent them visually.

The symbols that are used in this usability test report to represent ratings are available free of charge for use by anyone. If you use other symbols, please make sure that they are easily distinguishable. Usability considerations dictate that it must be easy for hurried readers to identify catastrophic usability problems and critical usability problems when they are skimming the findings.

The ratings used in this usability test report are not perfect. However, they match common practice and the current state of the art. For example, the difference between a “serious” and a “critical” usability problem, or the difference between a “critical usability problem” and an “catastrophic usability problem” are not explained sufficiently well to allow reproducible ratings of usability problems.

2. General Findings



Back button always works without any problems

Test participants always got what they expected when they pressed the Back button. On some comparable websites the Back button does not always work as users expect.



The website preserves the contents of the shopping cart well

Test participants never lost an item in the shopping cart. On some comparable websites, there is a timeout that clears the shopping cart and asks participants to start over. If a timeout limit exists on this website, none of our test participants encountered it.



Easy to remove items from shopping cart

Test participants sometimes put unwanted items in the shopping cart by mistake. No one had any problems removing the extraneous items, though.



FAQs use slang without explanation

FAQs use slang without explanation: Examples of terms that confused test participants: *Damage Waiver, Medical-life coverage, Liability coverage*

"It would be nice if there was a little bit more to help me out with that"

"[The FAQs] didn't explain it well"

Recommendation: Make terms that are hard to understand clickable. When users click these terms, show a pop-up that explains the meaning using commonly known terms and examples.

Elements in the Reporting of a Finding

The description of a finding has the following components:

- Rating of finding
- A header that briefly describes the finding
- A description of the finding
- Relevant quotes from test participants during their encounter of the finding (optional)
- Recommendations for improvement (optional)
- Screenshots illustrating the finding (optional)

Description of the finding

The description of the findings should be as long as needed: all readers must understand the finding. On the other hand, the description should be as short as possible – no unnecessary information.

Rule of thumb: If a description exceeds 10 lines, the author should consider carefully whether the description can be shortened.

Generalized descriptions such as *Error messages contain slang that test participants did not understand* are OK as long as they are accompanied by at least two specific examples.

Test participants' quotes

Test participants' quotes show the excitement of test participants as well as their anger. They are an excellent supplement to the author's objective description. Quotes should be clearly distinguishable as such.

Recommendations for improvement

A usability test report can be limited to describing findings. It can also include specific recommendations for solving usability problems. At the start of each usability test consider whether recommendations are appropriate for your audience.

Recommendations may be useful if they are not obvious from the description of the usability problem. Often, they make the description of the usability problem easier to understand.

Sometimes recommendations cause trouble. If you are not familiar with technical and organizational constraints, it may be difficult to write useful and realistic recommendations. Recommendations can be politically inept if other stakeholders consider themselves responsible for the design. It may be useful to develop recommendations in cooperation with the development team based on the usability test report, for example in a workshop.

This usability test report contains recommendations for some of the findings.

3. Rent a Truck

- 
Test participants easily realized how truck price depends on truck size
 See the example in Figure 1.

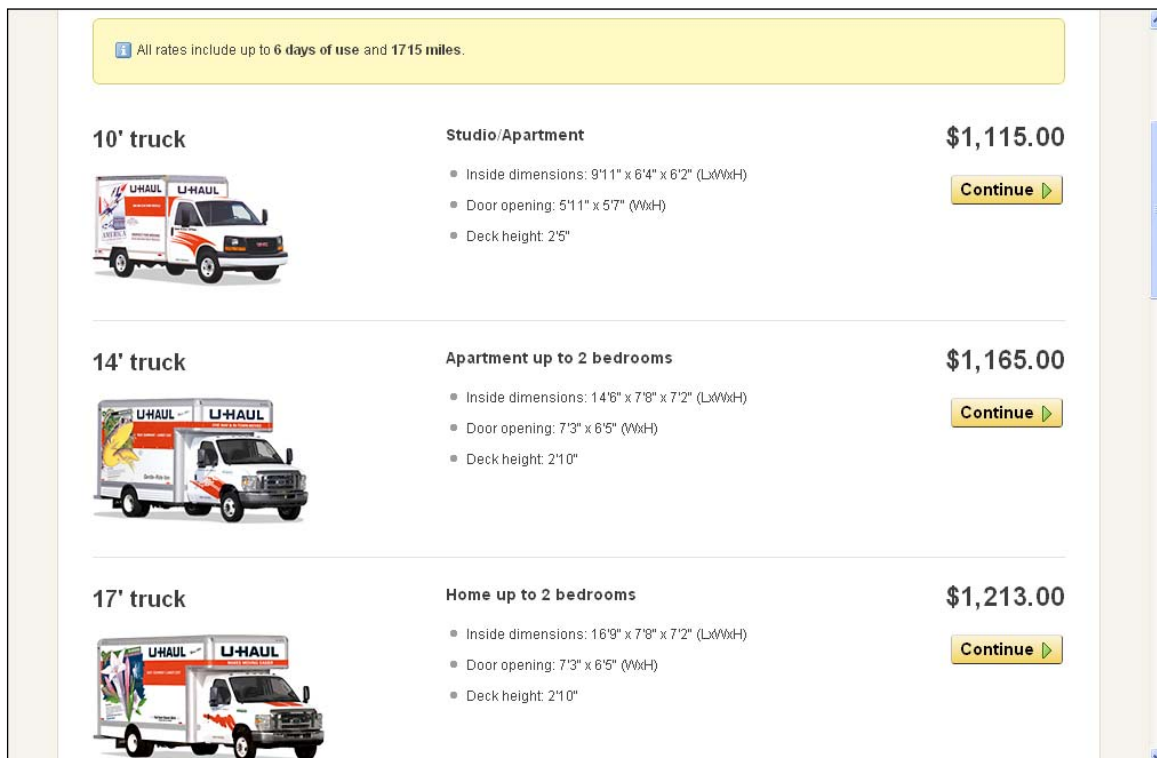


Figure 1. Overview of truck prices. It's easy to see how truck price depends on truck size.

- 
Insufficient help for selecting right truck size

Test participants had problems selecting the correct truck size.

According to U-Haul, the optimal truck for this rental is the 14' truck. The five participants selected the following trucks:

- Participant 1: 14' truck.
- Participant 2: 20' truck because the participant incorrectly assumed that the apartment had 3 bedrooms (instead of 3 rooms)
- Participant 3: In doubt as to whether 10' or 14' truck was required. Ended by selecting 14' truck.
- Participant 4: Unsure what size truck she would need. When she noticed that the price difference was small, she selected a 14' truck.
- Participant 5: 14' truck.

Recommendation: Include an example of what will fit in each size of truck.

Unclear if included mileage is sufficient

Test participants noticed the text at the top of the selection window that says *All rates include up to 6 days of use and 1715 miles*

Test participants wondered if the 1,715 miles were sufficient to drive from Pittsburgh to Denver. They also wondered what would happen if they used more miles.

Recommendation: Change the message to *All rates include up to 6 days of use and 1,715 miles. The distance from your point of departure to your destination is about 1,460 miles. In the unlikely case that you use additional miles, they will be charged according to our additional miles rate*

Total price not shown in the shopping cart

Test participants wanted to know the full price of the rental in the shopping cart, not just what is due today excluding taxes and fees as shown in Figure 2.

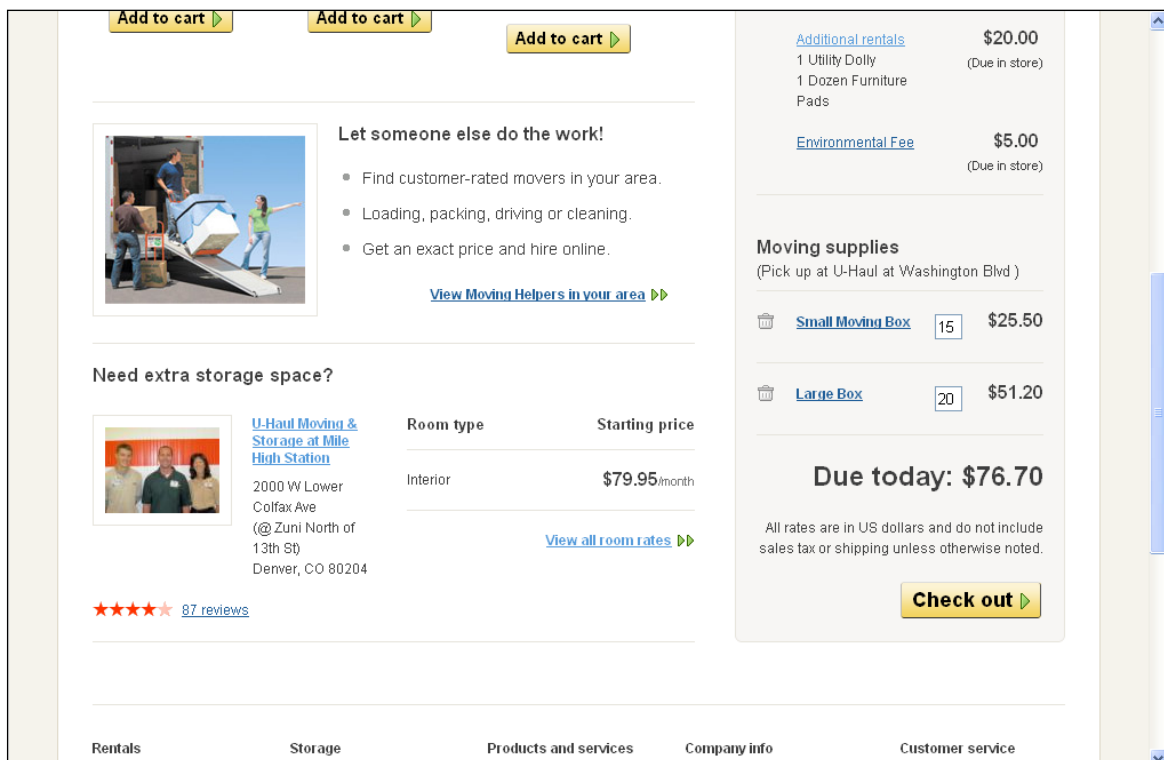


Figure 2. Bottom of shopping cart with totals. Test participants wanted information about the full price of the rental including taxes and fees.



Total price not shown on the checkout page

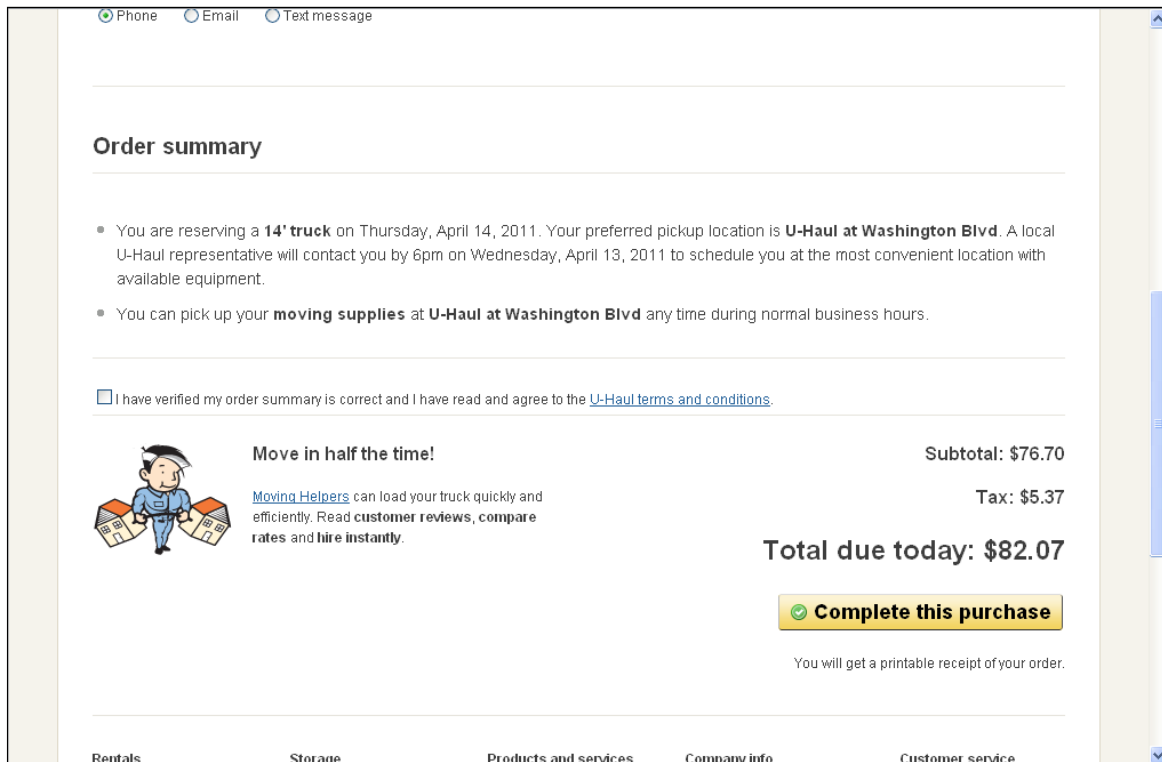
Test participants were displeased that they could not see the total price in the shopping cart. They were even more displeased when they found out that they could not even see the total price on the checkout page. See Figure 3.

"'Due today' is \$30.45. Where are they getting that from? It would be nice if they told me what this was like, what fees are being included here."

"Where is my final price?"

Recommendations:

- In the shopping cart and on the checkout page show both what is due today and what the total price of the order including truck rental and storage rental will be.
- Offer prices both with and without taxes. If there is no room for both, omit the prices without taxes.
- Ask the user for the expected ending date of any storage rental included in the offer. Use the ending date to compute the total price of the storage rental.
- Make it completely clear how the website arrives at any total or subtotal. If there is insufficient room for a full explanation, add the link [explain](#) next to the total or subtotal. Clicking this link must display a detailed breakdown.



The screenshot shows a checkout page with the following elements:

- At the top, there are three radio buttons for contact preferences: Phone (selected), Email, and Text message.
- An "Order summary" section contains two bullet points:
 - You are reserving a 14' truck on Thursday, April 14, 2011. Your preferred pickup location is U-Haul at Washington Blvd. A local U-Haul representative will contact you by 6pm on Wednesday, April 13, 2011 to schedule you at the most convenient location with available equipment.
 - You can pick up your moving supplies at U-Haul at Washington Blvd any time during normal business hours.
- Below the summary is a checkbox: I have verified my order summary is correct and I have read and agree to the [U-Haul terms and conditions](#).
- On the left, there is a cartoon character holding boxes and a promotional message: "Move in half the time! [Moving Helpers](#) can load your truck quickly and efficiently. Read [customer reviews](#), compare rates and hire instantly."
- On the right, the pricing is displayed:
 - Subtotal: \$76.70
 - Tax: \$5.37
 - Total due today: \$82.07**
- At the bottom right, there is a yellow button with a green checkmark that says "Complete this purchase".
- Below the button, it says: "You will get a printable receipt of your order."
- At the very bottom, there is a navigation bar with links: Rentals, Storage, Products and services, Company info, and Customer service.

Figure 3. The order summary with totals at the bottom of the checkout page. Test participants wanted information about the full price of the rental including taxes and fees.

Screenshots

Screenshots make findings easier to understand.

Display screenshots after the corresponding finding and on the same page as the description of the finding. A caption that refers to the corresponding finding is necessary.

Video Clips in a Usability Test Report

Usability test reports may contain embedded video clips. When the reader clicks a placeholder, a video clip of about 30 seconds to 5 minutes length starts playing. The video clip documents a finding by showing one or two test participants who encounter the problem.

Tips:

- The length of the video clip must be shown in connection with the placeholder.
- The clip should show the interaction of one or two test participants with the test object. Clips where usability professionals explain their views of findings are not useful.
- If it is difficult to understand what a test participant is saying, use subtitles.
- Video clips must not start playing automatically.
- A video clip that shows two test participants who encounter the same problem is more convincing than a video clip with just one test participant.

Considerable time is required to gather and edit helpful and convincing video clips. Consider carefully whether the video clips are worth the effort. In other words: Will anyone ever find the time to view these video clips? Will they influence decisions?

4. Insurance



Adequate liability coverage included only in Super Safemove

No test participant realized that SafeMove only includes limited liability insurance. No test participant even for a moment considered Super Safemove, which includes adequate liability coverage. The website did not adequately inform test participants of the considerable financial risk they were running if they caused a major accident while they were covered only by Safemove.

Even though the risk is small, users could be liable for \$500,000 or more in damages if they hit someone and it turns out that they are to blame. This problem could ruin a user's life.

Test participants also mistakenly believed that truck insurance is covered by their credit card or auto insurance policy, even though the Damage Coverage page states that it is not.

Test participants made their selection based on the screen shown in Figure 4.

An enquiry to U-Haul's damage protection expert brought up the following information:

In the U.S. all motor vehicle rental companies are to provide state minimums in liability at no cost to the customer. The caveat is that these amounts of liability were fixed 25 years ago. For example in Arizona, you automatically get \$5k in liability, which can be exhausted very quickly. Very few customers know this. It is written in the folder that holds the customer's receipt, which also serves as an extension of the rental contract. The customers that do know it immediately ask "how can I get more?"

Recommendations:

- Consider changing the damage protection recommendation from Safemove to Super Safemove, which includes an adequate liability coverage.
- Make it clear that Safemove only includes limited liability coverage. See the sketch in Figure 5.
- Explain in popular terms what *liability coverage* is.

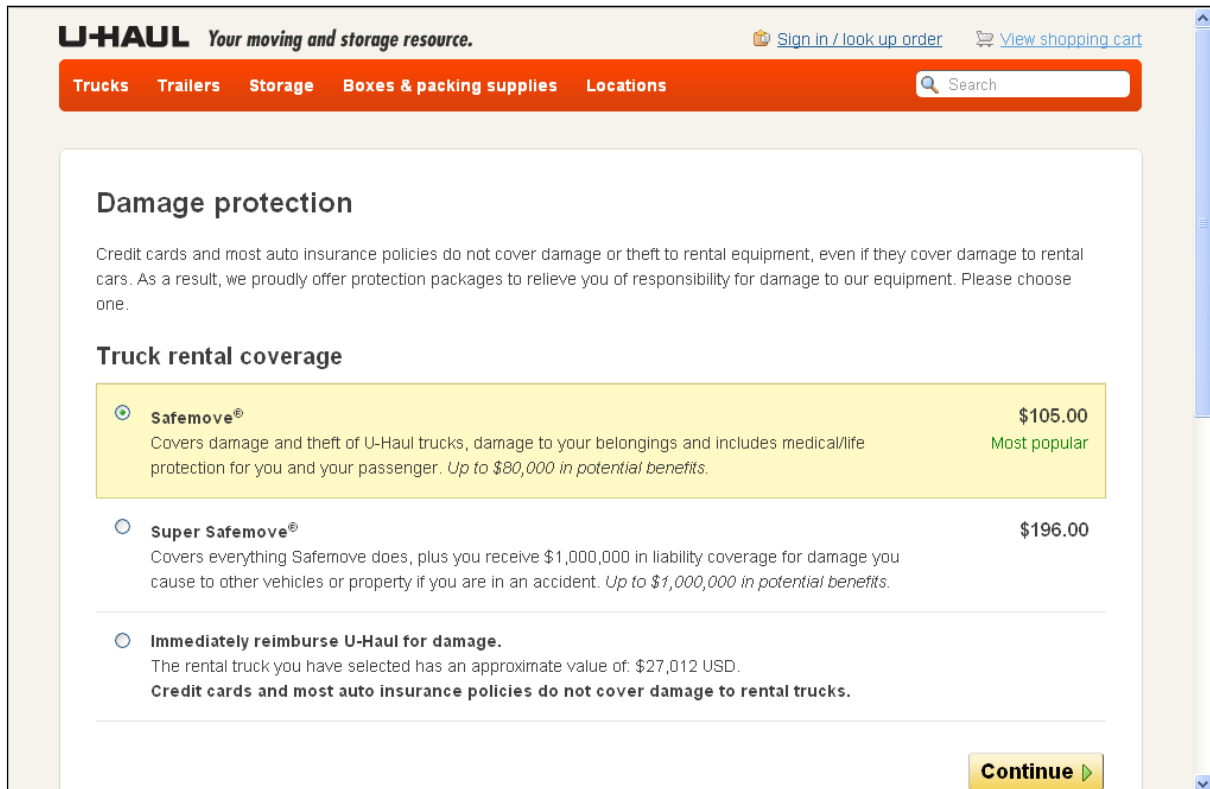


Figure 4. Damage protection options shown when renting a truck. Test participants did not understand the crucial difference between Safemove and Super Safemove.

Type of coverage	None	SafeMove	Super Safemove
Price	\$0	\$140	\$280
Damage to or theft of truck What is this?	Not covered	Covered	Covered
Damage to your belongings What is this?	Not covered	Covered	Covered
Medical/life protection for you and a passenger What is this?	Not covered	Covered	Covered
Liability What is this?	Minimum coverage required by law, about \$5,000 (varies by state)	Minimum coverage required by law, about \$5,000 (varies by state)	\$1,000,000 in liability coverage
U-Haul's recommendation	Not recommended	Most popular	For those who want total peace of mind

Figure 5. Recommendation for a more usable way of presenting damage protection options when renting a truck.



Users can rent trucks without being asked about coverage

Test participants demonstrated that it is possible to rent a truck without ever seeing the *Damage protection* page. In this case the rental by default included no coverage, and the website did not ask test participants to make a choice.

The problem arises because the truck is added to the shopping cart when users select a rate on the *Rates* page and move to to the *Select pickup location and time* page. If users do not select a pickup location, they may never see the *Damage protection* page. If they later access the shopping cart through the link *View shopping cart* link in the upper right corner of most pages, they can essentially rent the truck without knowing that damage protection is available.

Recommendations:

- Add the truck to the shopping cart when users click *Continue* on the *Damage protection* page.
- Warn users if they click *Check out* without having explicitly selected a damage protection scheme (including *Immediately reimburse U-Haul for damage*)
- Force users to make a selection on the *Damage protection* page by not having a default selection.

Catastrophic Problem or Minor Problem?

The previous problem (*Adequate liability coverage included only in Super Safemove*) is considered by some usability professionals to be a catastrophic problem while others argue that it's a minor problem or no usability problem at all. The arguments brought forward by these two groups illustrate some of the problems involved trying to rate a usability problem.

Proponents of the “catastrophic problem” rating argue

- Even though the risk is small, this problem could ruin the users' life if they hit someone and it turns out that they are to blame.

Proponents of the “minor” or “no usability problem” rating argue

- This is not a usability problem at all. Americans are used to the fact that insurance options when renting a car or a truck are confusing and unclear. The fact that the second option describes its additional benefit does make it clear that the basic coverage does not include adequate liability coverage, and by implication suggests the possible desirability of such coverage.

While it would be nice and desirable for the corporation to try to educate its customers about how to wisely choose insurance, it's not their responsibility, nor would their efforts necessarily be effective. They have a reasonable expectation that anyone renting a vehicle knows that there is a chance of an accident, and that that is why they have the option of purchasing insurance. So it's not fair to hold U-Haul responsible for making it perfectly clear. It seems like too high a standard to call it "the worst usability issue."

This problem was identified after the usability test, so there was no chance to discuss it with the test participants. No test participant realized that there could be a problem.

Is One Test Participant Enough to Justify a Finding?

Be careful when you rate a problem as “critical” or even “catastrophic” if only one test participant encountered the problem, even when the problem hit that test participant hard.

Problems that only affect one test participant may be included in the usability test report if the following conditions are met:

- Other test participants did not encounter the conditions or the situation where the problem occurred.
- Relevant, recognized heuristics or two experienced usability professionals confirm that the problem deserves the critical rating.



Unclear if vandalism is covered by Safemove

Test participants were unsure about coverage because they felt that vandalism is not "accidental coverage", which they quickly understood is covered.

Test participants found the relevant page in the FAQ (Figure 6), but they wanted further details:

"They shouldn't be liable, but I really want to find out to be absolutely sure".

"If you're down in Mississippi and the truck just got knifed I'd want to have something saying 'No you're not responsible for the truck' "

Test participants followed the link from the FAQ to the detailed information about Safemove (Figure 7). All test participants had serious problems extracting the desired information from this page.

Recommendations:

- Provide a simple explanation of Safemove, for example *Safemove is an optional service which, if accepted, eliminates your financial liability for loss or damage to the U-Haul vehicle, its parts and accessories, provided the vehicle is used in accordance with the terms and conditions of the rental agreement.* (Adapted from Budget.com)
- Simplify the text. Remove *Subject to exclusions* and footnotes such as *No deductible**



Unclear if there is a deductible for Safemove

Test participants who clicked the footnote link for *No deductible* gave up understanding the legalese that appeared.

Recommendation: Eliminate the footnote. Change the text to: *No deductible. Exception: New York locations have a \$150 Damage Waiver deductible.*

What is the difference between Super Safemove, Safemove and CDW?

[Safemove](#) coverage is for our moving trucks only. It is three components; damage waiver, cargo coverage and medical-life coverage. It does not have liability coverage.

[Super Safemove](#) coverage is for our moving trucks only. It is four components; damage waiver, cargo coverage, medical-life coverage and one million dollars in liability coverage.

[Collision Damage Waiver \(CDW\)](#) is for pickup and van rentals and only covers accidental damage to the equipment. There is no coverage for cargo, medical or liability.

Can I purchase Safemove or Safetow for a pickup or van rental?

No. Safemove coverage is specifically designed for our moving trucks. We offer a Collision Damage Waiver (CDW) for pickup and van rentals.

Do I need to provide proof of insurance if I decline CDW for pickup and van rentals?

Yes. If you decline the optional CDW, you will be asked for proof of coverage, but if you cannot, you can still reimburse U-Haul for any damage caused during your rental when you return.

Is U-Haul insured for liability?

Yes, but only to the state minimums which are sometimes low. You should check with your state laws to see what the MFR coverage is for motor-vehicle rental companies

Will U-Haul bill me if I damage their rental equipment without coverage?

No, you are immediately financially responsible.

Figure 6. Excerpt from FAQs for Damage Coverage. It's unclear if vandalism is covered by Safemove.

Safemove®

Safemove provides protection for the U-Haul rental truck and everything inside it (including cargo, drivers and passengers).

Collision Damage Waiver (CDW)	Cargo coverage	Medical & Life coverage
<ul style="list-style-type: none"> Frees you of responsibility for any "accidental damage" to the rental truck No deductible* Subject to exclusions <p>View a Safemove policy</p> <p>View explanation of Safemove features</p>	<ul style="list-style-type: none"> Covers damage to your goods from collision, fire, upset, windstorm and overturn of the rental truck One-way Rental, up to \$25,000 of coverage In-town Rental, up to \$15,000 of coverage \$100 deductible Coverage is for actual cash value and is subject to exclusions 	<ul style="list-style-type: none"> Provides you and your passengers with up to \$1,000 of coverage towards medical bills, in case of an accident Provides you and your passenger with life coverage in the case of a fatality Lessee loss of life, up to \$25,000 of coverage Passenger loss of life, up to \$15,000 of coverage Subject to exclusions

Super Safemove®

Super Safemove® is all the benefits of Safemove, explained above, plus \$1,000,000 in liability coverage, for damages caused to others and their property. Giving you the "all-around" coverage that you need.

Additional Liability Insurance (ALI)

<ul style="list-style-type: none"> \$1,000,000 for property damage, bodily injury or lawsuits brought forwards by 3rd parties not involved with the rental Nothing out of your pocket <p>View explanation of Super Safemove features</p>	<ul style="list-style-type: none"> No increased premiums No deductible* Subject to exclusions 	<p>New York residents View Super Safemove policy</p> <p>MI, MN, WI and KS residents View Super Safemove policy</p> <p>All other U.S. residents View Super Safemove policy</p>
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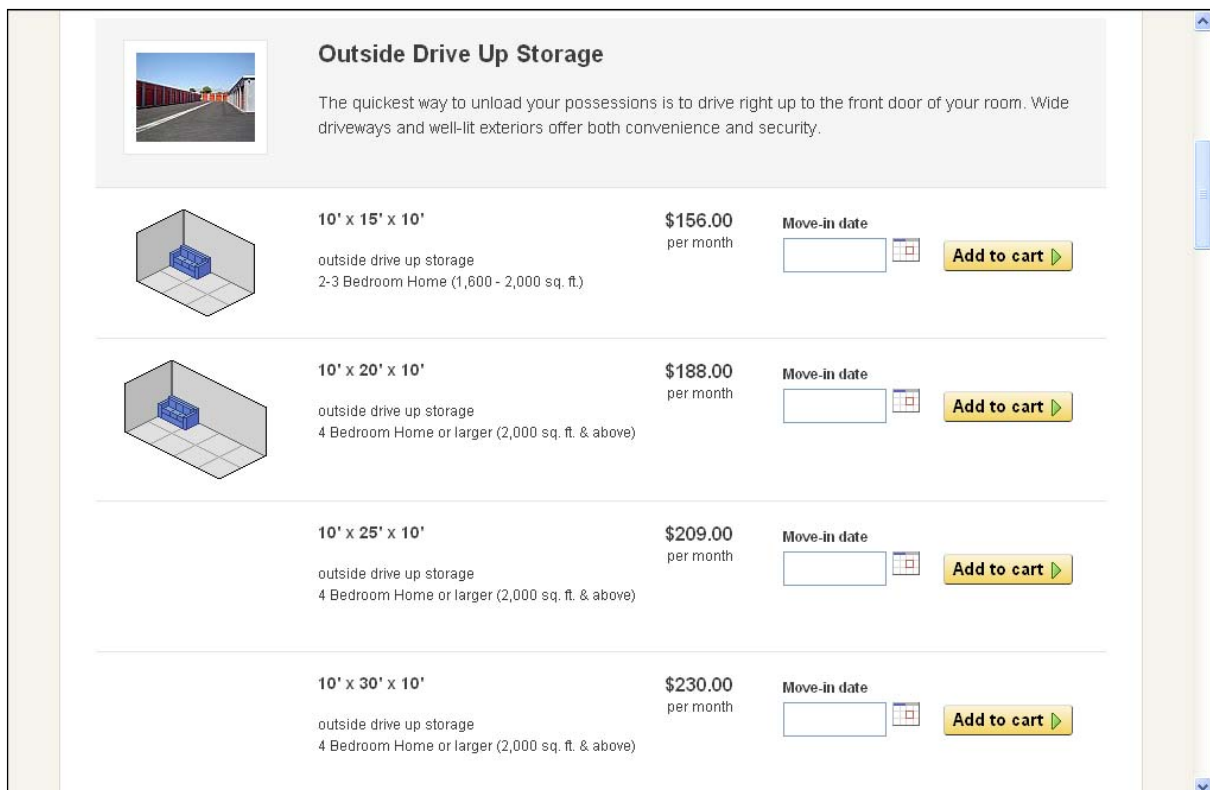
Figure 7. This detailed information did not answer test participants questions about Safemove either.

5. Rent Storage

✓ Pictures of sofas, people useful in storage room drawings

Test participants considered pictures of sofas and people useful in storage room drawings, because they provided an immediate impression of how much would fit into the room.

See the example in Figure 8.



Outside Drive Up Storage
The quickest way to unload your possessions is to drive right up to the front door of your room. Wide driveways and well-lit exteriors offer both convenience and security.

Dimensions	Description	Price per month	Move-in date	Action
10' x 15' x 10'	outside drive up storage 2-3 Bedroom Home (1,600 - 2,000 sq. ft.)	\$156.00	<input type="text"/>	Add to cart
10' x 20' x 10'	outside drive up storage 4 Bedroom Home or larger (2,000 sq. ft. & above)	\$188.00	<input type="text"/>	Add to cart
10' x 25' x 10'	outside drive up storage 4 Bedroom Home or larger (2,000 sq. ft. & above)	\$209.00	<input type="text"/>	Add to cart
10' x 30' x 10'	outside drive up storage 4 Bedroom Home or larger (2,000 sq. ft. & above)	\$230.00	<input type="text"/>	Add to cart

Figure 8. List of storage sizes offered by Guardian Storage Solutions in Pittsburgh. Test participants considered the pictures of sofas useful in storage room drawings, but they found it difficult to compare storage prices.

! Difficult to compare storage prices

Test participants wanted to compare storage prices of different suppliers. They could not figure out how to do this, because the current storage room selection process is supplier centered rather than user centered.

Recommendation: Start by asking users for their storage requirements instead of asking them to select a supplier. Then offer the minimum storage space that will hold the user's belongings. Display an offer from each supplier within a reasonable distance. This model is used successfully for truck rental.



No help offered for selecting the right size of the storage room

Test participants had problems selecting the correct storage room size.

"It would be really nice if I could just type in the dimensions I need"

"I am wondering if there's anything that will help me calculate what I would need, because I'm definitely not a mathematician"

"Maybe I can go through and say 'this is the size I need, find me the cheapest one' "

"I am clueless as to which storage I need"

One participant selected a room that was too small to contain the objects. Three participants selected rooms that were larger and thus more expensive than they needed.

The objects that the couple wants to store will fit in a 5' x 5' x 8' room. The monthly cost of a 5' x 5' x 10' room at Guardian Storage Solutions is \$51.

The five participants selected the following storage room sizes at the costs shown:

- Participant 1: 5' x 5' x 9' - \$50 from StorExpress. OK.
- Participant 2: 5' x 5' x 4' - \$0 from Angels Self Storage. The fridge will not fit into this storage and the real price is not shown.
- Participant 3: 5' x 10' x 8.3' – \$115 at Iron City Self Storage. Too large and more expensive than needed.
- Participant 4: 10' x 5' x 10' – \$78 at Guardian Storage Solutions. Too large and more expensive than needed.
- Participant 5: 10' x 5' x 10' – \$78 at Guardian Storage Solutions. Too large and more expensive than needed.

Quantification

As a general rule, avoid quantified phrasings in findings.

Example: Do not write *Four test participants had problems selecting the correct storage room size*. The phrasing *Four out of 5 participants had problems selecting the correct storage room size* is not better because it's easily interpreted as "80%". The small number of test participants in a qualitative usability test like this one does not permit such generalization; the statistical uncertainty in the figure "80%" is simply too high.

A few test participants, Some test participants and Several test participants are all imprecise. We recommend the neutral expression *Test participants*. If a problem was encountered by all test participants, it's OK to write *All test participants*.

Discuss quantification with the client when selecting the evaluation method. If the client wants reliable quantified data, then a qualitative usability test is not a suitable method.

! One storage location displayed all prices as \$0.00

After noticing that the prices at Angels Self Storage were all \$0.00 (see Figure 9), test participants left Angels Self Storage's page and chose another storage location.

"Why is it telling me that it's free?"

"There are no monthly rates on this one so I don't feel so confident about using this particular page as I did on the last one"

Recommendation: Carry out automatic sanity checks of prices regularly. Notify the supplier if some or all prices look strange.

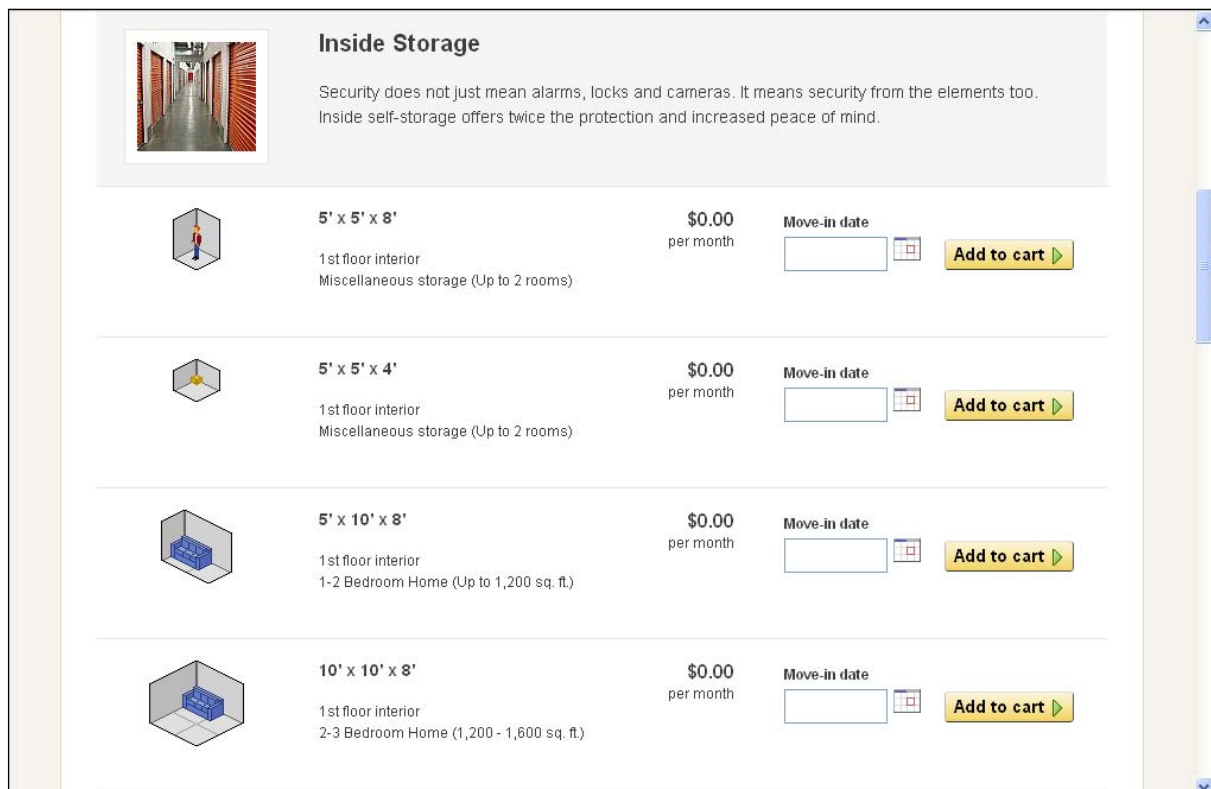


Figure 9. List of storage sizes offered by Angels Self Storage in Pittsburgh. All prices are \$0.00.

6. Rental and Storage Locations, and Maps

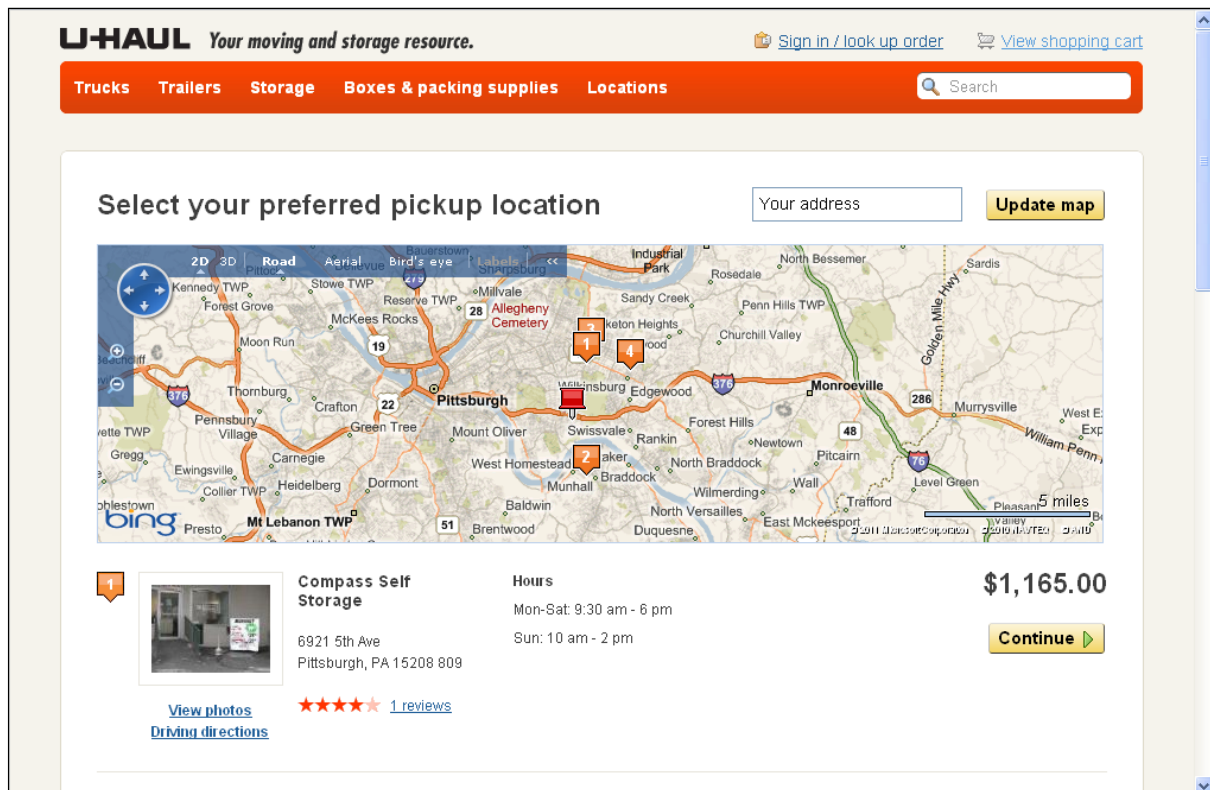


Figure 10. Top of list of pickup locations that match the user's criteria.

✓ Location search hardly ever fails

The location search is tolerant and produced correct results for the test participants in almost all cases.

✓ Photos, user ratings, reviews of rental and storage locations are useful

Test participant behavior clearly showed that reviews from other users are important. Test participants decided on a truck rental location or storage location based on the ratings and reviews. If a rating looked good, they opened the reviews and glanced through them. They instantly rejected locations with few or unfavorable reviews.

(About photos:) "Does it look like a safe location?"

 **Phone numbers for locations are sometimes missing**

Test participants were confused that phone numbers for rental locations were sometimes provided and sometimes not.

There are three types of location lists. The lists show storage locations, U-Haul locations, and truck pickup locations, respectively. Some lists include the phone numbers of the locations, some do not. Test participants wanted phone numbers included in all types of lists. See the Summary table in the next finding.

"I feel like the phone number should be right here on the pick-up location."

 **Distances in miles to locations are sometimes missing**

Test participants were confused that distances in miles from their residence to rental locations were sometimes provided and sometimes not.

There are three types of location lists. The lists show storage locations, U-Haul locations, and truck pickup locations, respectively. Some lists include the distances in miles from the address the users entered to the locations, some do not. Test participants wanted distances included in all types of lists.

"It's not showing me the distance. I would really like to see the distance."

"It still surprises me that it sorts by distance but it doesn't actually tell me what the distance is"

Distances are provided to storage locations and users were pleased with this.

Summary:

Origin of location list	Phone numbers provided	Distance provided
Top menu <i>Storage</i>	Yes	Yes
Top menu <i>Locations</i>	Yes	No
Top menu <i>Trucks > Get rates</i>	No	No

Recommendation: Provide both phone numbers and distance in all lists.

End of findings.

Positive Findings

Include a significant number of positive findings. A positive finding describes a feature that test participants liked.

Rule of thumb: At least 25% of the reported findings should be positive.

Positive findings are important for the following reasons:

- They ensure that features that test participants liked are not removed simply because the development team was not aware that test participants appreciated them.
- They create a more positive attitude towards the usability study.
- They support the learning process in the organization.

Phrasing Findings

Polite

Phrase findings politely. Phrasings like the following are unacceptable:

Not offering help for selecting the right size of the storage room is unprofessional and sloppy.

If a test participant actually said so, consider carefully whether the quote should be used. Use frank but not insulting quotes.

The above example is made up. This usability test report contains no impolitely phrased findings.

Always refer to test participants

Always refer to test participants in findings. The previous finding includes the statement *Test participants wanted distances included in all types of lists*. The alternative phrasing *Include distances in all types of lists* sounds like a personal opinion from an inspection rather than a finding from a usability test.

7. Description of the Object of Evaluation

The object of evaluation was the website www.U-Haul.com as it was available to the public in March 2011. The home page of the website at the time of testing is shown in Figure 11.

The target group for the website is individuals who are in possession of a valid driver's license and who want to rent a moving truck for a local or long distance move.

The website also sells and rents moving supplies and moving tools. It also rents storage space.

Test participants were explicitly asked to refrain from submitting orders. Apart from this restriction, the website was fully available to them.

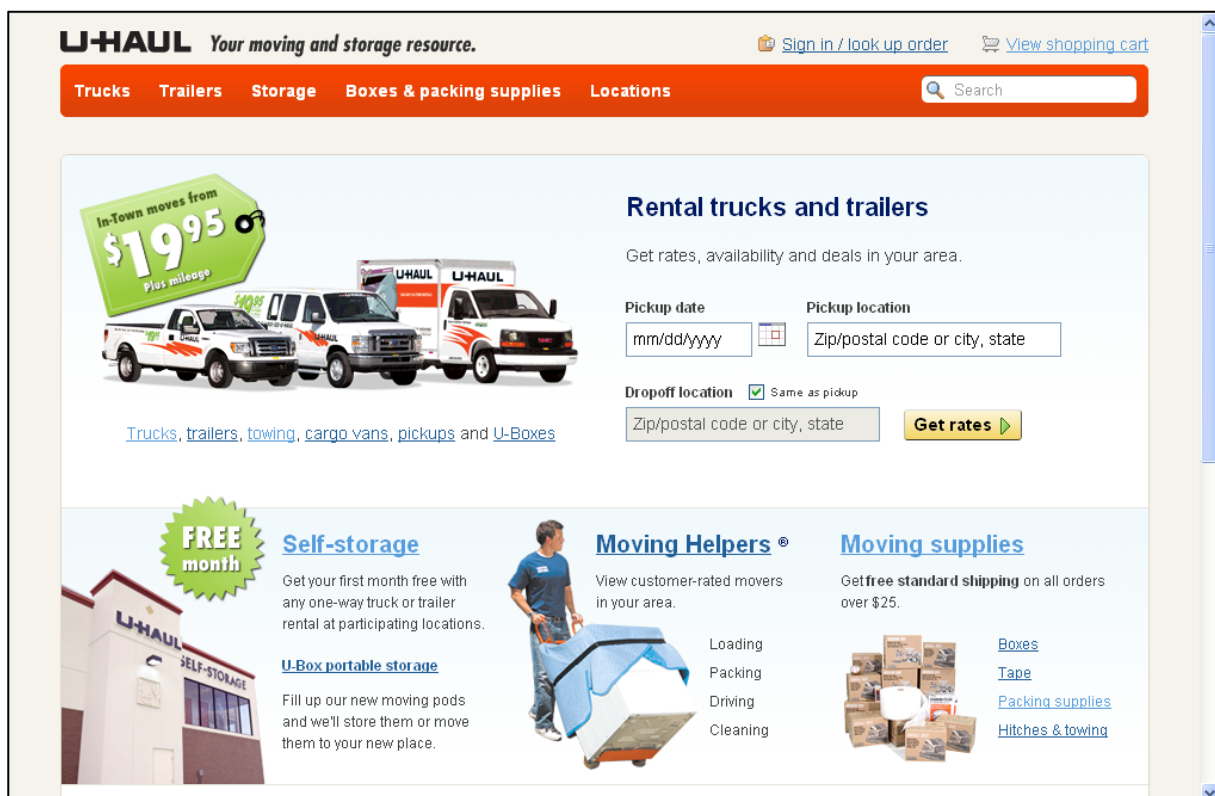


Figure 11. Home page of www.U-Haul.com at the time of testing.

Description of the Object of Evaluation

Examples of objects of evaluation are: A concept, a prototype, a working software system, a hardware product, or a subcomponent of a product or a service.

The following information describes the object of evaluation succinctly:

- The full official name of the object
- A short description of the object and its purpose
- Precise indication of the tested version: name, version number, release number or release date
- The part of the object that was tested

In addition, we recommend the following information:

- The target group of the object
- The context of use in which the object is used
- References to any previous evaluations

Target group and context of use may be specified in other documents, for example a specification. If this is the case, provide a reference to these documents in the usability test report.

8. Purpose of the Evaluation

The primary purpose of the evaluation was to carry out an exemplary usability test to be used for a scientific study. (The scientific study is named CUE-9, see www.dialogdesign.dk/CUE-9.htm).

A secondary purpose was to determine usability strengths and weaknesses of the U-Haul website.

9. Evaluation Method

Overview of the evaluation method

This usability test was conducted as an unmoderated “think aloud” usability test by the company <remote usability testing service>. This company specializes in unmoderated usability tests with users recruited from their user base. In an unmoderated usability test, users are not observed live while they carry out tasks. Instead, their interactions with the website and their verbal comments are video recorded for later analysis.

Five users each carried out 7 tasks on the website in separate usability test sessions. At the end of each usability test session, they answered a number of pre-defined questions.

Subsequently, the videos were analyzed by the first author.

Methodological basis

This usability test used the recognized “think-aloud” method. This method is described for example in Dumas und Redish (1999): *A Practical Guide to Usability Testing*, and Hartson und Pyla (2012): *The UX Book*.

Usability test sessions

The evaluation is based on an analysis of videos from 5 unmoderated usability test sessions of U-Haul.com carried out in late March 2011 by UserTesting.com.

Each usability test session lasted between 13 and 23 minutes. The total time for each usability test session including answering questions was less than 30 minutes.

Target group for the system

The target group for the website is individuals who are in possession of a valid driver’s license and who want to rent a moving truck for a local or long distance move. The target group includes a large part of the adult, English-speaking US population. The target group is expected to have some knowledge of computers and the internet, but they do not have to be computer professionals.

Segmentation

This usability test did not have any segmentation of test participants.

10. Usability Test Script

Briefing

UserTesting.com does not publish the instructions given to test participants ahead of a usability test session.

Pre-Session Interview

No pre-session interview was conducted. At the time when this usability test was conducted, UserTesting.com only allowed questions to test participants after completion of the tasks.

Briefing and Pre-Session Interview

Relevant checklists for a briefing and a pre-session interview can be found in a textbook, for example the CPUX-UT Curriculum.

Test tasks

The test tasks were devised by the first author. The author aspired to test the most frequently occurring test tasks. Tasks were reviewed by a user experience specialist working for U-Haul and by several independent usability professionals. The usability of the test tasks and the instructions for the test participants in the unattended usability test were tested in two dry-runs. Test tasks and instructions were subsequently improved based on the feedback.

The following task set was used for all sessions:

Scenario: Your friends Mike and Anna are about to move from Pittsburgh, PA to Denver, CO. They have an apartment in Pittsburgh consisting of a living room, a bedroom, a kitchen, and a bathroom. They want to find the cheapest service for the move to Colorado. They expect to make the move themselves with some help from a few friends.

They are planning to move out on April 14th and they expect the trip to take 3 days.

The couple plans to return to Pittsburgh after 2 years so they want to rent a self storage unit in Pittsburgh for the stuff they don't need in Denver.

Task 1: The couple needs a truck that is suitable for all the furniture and belongings in their 3 room apartment. Please find the total price the couple will have to pay for the truck.
Note: They are moving on April 14th from Darlington Rd. in Pittsburgh, PA 15217 to Emerson St. in Denver, CO 80218

Expected answer: According to U-Haul, a 14' truck is required. The price of the truck is \$1,165 plus Super Safemove insurance \$196 plus environmental fee \$5. Taxes are not included. The tax rate does not seem to be available from the website.

Task 2: Before you go any further, you want to check if Mike and Anna need a special driver's license to drive the truck across country. Where would you find that info?

Expected answer: An ordinary driver's license is OK according to the FAQ "Do I need a special driver's license".

Task 3: They also need an indoor storage unit in Pittsburgh that can hold 10 moving boxes (18" x 18" x 16") and a large fridge. Find the per month cost of the storage.

Expected answer. The price of storage at Moore Self Storage, 1st floor, 5'x5'x8' for 24 months is \$59 a month.

Task 4: You have a few questions that the U-Haul website hasn't answered. Please find the phone number for the U-Haul pickup location closest to the couple's home on Darlington Rd. in Pittsburgh, PA.

Expected answer: U-Haul at Washington Boulevard, (412) 361-5580

Task 5: The couple has decided to rent the truck. Please book the truck you found the pricing for earlier. In addition, please order 20 large moving boxes, 15 small moving boxes, a utility dolly, and a dozen moving blankets.

Note: Please stop when you reach the "Billing Info" page. Do NOT submit the order.

Task 6: During the move, an unknown person scratched the truck in several places, probably with a knife. An auto body technician has estimated that the repair will cost \$2,000.

Since you helped the couple book the truck, they called to find out if they are liable for repair costs. And if so, how much will it cost?

Expected answer: The correct answer depends on the damage coverage test participants have chosen. If test participants have chosen Safemove or Super Safemove, their liability is zero. Otherwise, they are liable for the full amount.

Task 7: You were impressed with U-Haul during your friends' move and you are considering U-Haul yourself. Find the nearest U-Haul pick-up/drop off to your home.

Note: You live at 48105 Warm Springs Blvd., Fremont, CA 94539.

Expected answer: 135 Minnis Cir, Milpitas, CA 95035, 1.9 miles

Valid alternatives, for example based on reviews:

43455 Mission Blvd, Fremont, CA 9453, 4.3 m

41200 Blacow Rd, Fremont, CA 94538, 5.8 m

44511 Grimmer Blvd, Fremont, CA 94538, 3.7 m

45252 Industrial Dr, Fremont, CA 94538, 3.1 m

4833 Thornton Ave, Fremont, CA 94536, 9.0 m

Test Tasks

Test tasks are usually agreed with the client. For this usability test, test tasks were reviewed by a user experience specialist working for U-Haul.

Components in the description of a test task:

- The text given to the test participant
- The reason for selecting this task
- Expected answer (optional)
- Criteria for successful completion of the task

Task completion

A task was considered completed when test participants said that they found the correct answer, or when test participants moved on to the next task without finding the right answer. Since no moderator was present, it was not possible to help participants if they got stuck or when they arrived at an incorrect answer.

Post-Session Interview

After each usability test session, the test participant answered the following questions:

- Where do you live (town, state)?
- What is your occupation?
- What did you like most about U-Haul's website?
- What is most in need of improvement?

The first two questions would normally be part of the pre-session interview, but pre-session interviews were not possible in this unmoderated test.

List of test participants

Participant	Sex	Age	Occupation	Web savvy
1	M	24	Missionary	Average
2	M	52	Small business manager	Average
3	F	62	Retired. Formerly television news producer, then licensed paralegal.	Average
4	F	36	Housewife	Average
5	M	31	Sales and marketing	Average

All test participants were recruited by the company UserTesting.com, which specializes in unattended usability testing.

We do not have any information about the physical and technical context in which the usability test sessions were carried out. However, it seems reasonable to assume that unmoderated usability test sessions that are offered by a professional company are carried out in the test participants' private homes or in some other undisturbed location using the test participants' private computer and their standard browser.

Test Participants






The anonymity of test participants must be warranted. Names – including first names – must not be revealed in usability test reports.




































Information about occupation is important because it communicates a lot of information about test participants. This information must be precise as long as it does not reveal the identity of the test participant. Occupations like “student”, “retired” or “manager” are imprecise. Better are “theological student”, “retired; former butcher” or “manager, furniture retail sales”.

In a usability test with in-house test participants, anonymity considerations may dictate that no or imprecise occupational information is provided in the usability test report. When choosing between precise occupational information and real risk of breaking the anonymity, anonymity takes precedence.

Appendix 1 – Findings for Each Test Participant

The following table shows an overview of the findings. For each test participant the table shows how the first author evaluated the test participant’s solution of the task.

-  The task was solved correctly without problems
-  Problems occurred which delayed the test participant in carrying out the task.
-  The test participant encountered considerable problems but eventually succeeded in completing the task correctly.
-  The test participant was unable to complete the task or arrived at a result that deviated significantly from the correct result.
-  The test participant arrived at a result that posed an existential threat to the test participant or other human beings.

Test participant	1	2	3	4	5
Task 1 – See notes Price for truck rental, Pittsburgh to Denver					
Task 2 Check need for special driver’s license					
Task 3 – See notes Cost of indoor storage unit					
Task 4 Phone number of nearest U-Haul location					
Task 5 – See notes Rent truck and purchase moving supplies					
Task 6 – See notes Liability for repair costs					
Task 7 Find nearest U-Haul location					

Notes:

Problems in task 1: See the following findings in section 3:

- Insufficient help for selecting right truck size
- Unclear if included mileage is sufficient
- Taxes and fees are not shown
- Total price not shown – website only shows what user must pay in store

Problems in task 3: See the following finding in section 5:

- No help offered for selecting the right size of the storage room

Problems in task 5: See the following findings in section 4:

- Adequate liability coverage included only in SuperSafemove
- Users can rent trucks without being asked about coverage

Problems in task 6: See the following findings in section 4:

- Unclear if vandalism is covered by Safemove
- Unclear if there is a deductible for Safemove

Findings for each test participant

If the table clearly shows that test participants had problems carrying out a particular task, include a reference to the usability problems that caused the problems after the table as shown for tasks 1, 3, 5 and 6 in this usability test report.

Appendix 2 – Index of Findings

Index of Findings

The index of findings is optional.



Positive findings

Works well. This approach is recommendable.

- **Back button always works without any problems11**
- **The website preserves the contents of the shopping cart well11**
- **Easy to remove items from shopping cart.....11**
- **Test participants easily realized how truck price depends on truck size13**
- **Pictures of sofas, people useful in storage room drawings23**
- **Location search hardly ever fails26**
- **Photos, user ratings, reviews of rental and storage locations are useful ...26**



Catastrophic problems

Existential threat. Potentially life-threatening; or bodily harm; or substantial financial damage.

- **Adequate liability coverage included only in Super Safemove17**



Critical problems

Test participants gave up – showstopper; substantial dissatisfaction; or minor financial damage to user.

- **Users can rent trucks without being asked about coverage.....19**



Major problems

Substantial delays; or moderate dissatisfaction.

- **Total price not shown in the shopping cart.....14**
- **Total price not shown on the checkout page15**
- **Difficult to compare storage prices23**
- **No help offered for selecting the right size of the storage room.....24**
- **One storage location displayed all prices as \$0.0025**



Minor problems

Minor dissatisfaction; noticeable delays; or superficial difficulties.

- **FAQs use slang without explanation11**
- **Insufficient help for selecting right truck size13**
- **Unclear if included mileage is sufficient.....14**
- **Unclear if vandalism is covered by Safemove21**
- **Unclear if there is a deductible for Safemove21**
- **Phone numbers for locations are sometimes missing27**
- **Distances in miles to locations are sometimes missing27**