# User Experience Inventory (UXinv)

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### **Abstract**

**User Experience Inventory (UXinv)** is a model designed to capture, itemize, or enumerate critical information about a subject's experience. UXinv can be used for information about a user experience, a customer experience, or the experience of an ally or adversary. This technique resists survivorship bias. This paper describes the UXinv model, identifying critical information gaps, detecting misalignment between experience and expectations, and providing additional analysis and optimization paths.

# **Available Support**

Contact the author for paid consultative support, commercial licensing, or to support our work as a patron. The author can be reached at UXinv@zerotrack.net

### **Disclaimers**

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## Introduction

The subject of our analysis might be a user who will access our website, a customer who wants to purchase goods or services we sell, an adversary we want to oppose, or an ally we want to encourage.

When someone wants a product or service or to achieve a goal, we might begin to form our understanding with some basic questions: What do they want? Why do they want that?

By expanding our understanding of a subject's experience, we gain several benefits:

- We can counter biases that our subject will undoubtedly be successful or unsuccessful.
- We can identify gaps in our available information and understanding.
- We can form an informed view of whether the subject will be successful or could become successful.
- We can form an informed view of where they will likely encounter impediments or barriers.
- We can identify how changes in the experience could support our objectives.

User Experience Inventory (UXinv) is a model that enables us to examine critical aspects of a subject's experience. UXinv can be used at a macro level to understand a large-scale objective or at a small scale to understand a specific critical component of a large-scale objective.

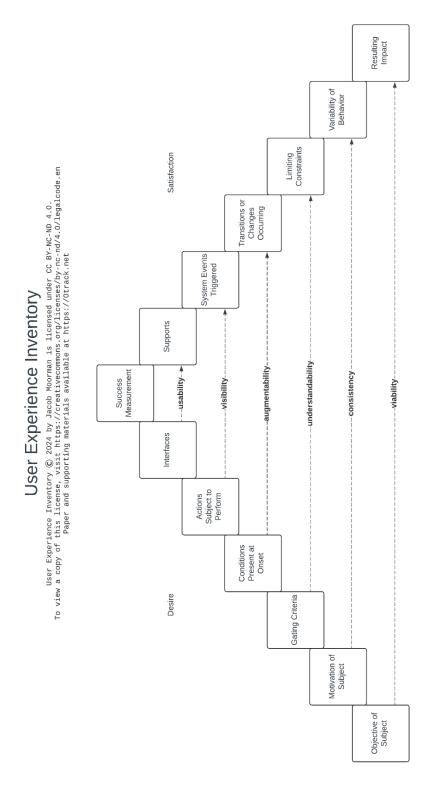
UXinv can be used by individuals or teams. UXinv can be used standalone to organize information or with other techniques such as customer journey mapping, timelines, and structured analytic techniques. Since UXinv does not enforce a timeline model of its own, when used with other techniques, UXinv can be used across a whole timeline for summary or on each segment of a timeline for detail.

UXinv can be used to consider an existing or past experience or when forming a future experience. UXinv supports examining or re-examining existing information or can help identify additional information to capture. If conditions change, UXinv can facilitate a consistent refresh of our understanding.

UXinv can be used electronically, on paper, on a whiteboard, and with generative AI.

# **UXinv Model Basics**

# **The UXinv Model**



# **Populating the UXinv Model**

Above the model, we should define our subject (e.g., user, customer, adversary, ally) and describe what we are modeling. Next, populate the model with the following information if the information is available:

#### • Objective of Subject:

What does the subject want or want to do?

#### Motivation of Subject:

Why does the subject want to achieve this objective?

#### • Gating Criteria:

What barriers prevent the subject from acting on their motivations?

#### • Conditions Present at Onset:

When the subject overcomes any barriers to action, what conditions are present, including any conditions they may want to change?

#### Actions Subject to Perform:

What actions will the subject take to get what they want?

#### Interfaces:

What systems, people, and tools will the subject interact with to perform these actions?

#### • Success Measurement:

How will the subject measure their success?

#### Supports:

What training, documentation, end-user support, accomplices, and supporters enable successful use of the interfaces?

#### • System Events Triggered:

When the subject takes action, what response is triggered in the system, including responses that are either visible or non-visible to the subject?

### Transitions or Changes Occurring:

What impact on conditions will be caused by the subject's actions?

#### Limiting Constraints:

What rules restrict the actions that the subject can perform?

### Variability of Behavior:

What variability can exist in the behavior of the subject's actions, such as quantity, size, color, material, duration, delay, interruptions, participants, destination, sequence, or session count?

### Resulting Impact:

What is the result produced?

### **UXinv Use Cases**

# **Identifying Misalignment with UXinv**

We can determine possible outcomes by considering the misalignment between a subject's desire and ability to achieve satisfaction. The following comparisons may be helpful:

#### Measurement:

- Compare **Success Measurement** internally vs externally:

  Does the subject measure success in the same way we measure their success?
- Would they consider a partial result to be successful?
- o How will the subject respond if they do not achieve success?

#### Usability:

- Compare Interfaces to Supports:
- Does the subject have experience with the interface technology and similar interfaces?
- What interfaces will cause the highest cognitive load on the subject?
- o Do adequate supports exist for the interfaces used by the subject?
- o How will the subject respond?

#### Visibility:

- Compare Actions Subject to Perform to Systems Events Triggered:
- o Do the subject's actions produce a result that the subject can observe?
- Are there also results that they cannot observe?
- o Are the results visible to us?

#### Augmentability:

- Compare Conditions Present at Onset to Transitions or Changes Occurring:
- Through action, can the subject change the conditions in the way they desire?
- o Can only some of the conditions be augmented?
- How will the subject respond?

#### • <u>Understandability</u>:

- Compare Gating Criteria to Limiting Constraints:
- Are the rules that restrict the subject's actions fully visible to the subject at the onset?
- o Is the subject able to understand these restrictions?
- How will the subject respond?

#### Consistency:

- Compare Motivation of Subject to Variability of Behavior:
- Moving from a general sense of the subject's motivation to the specifics, can the subject get what they want?
- Can the subject get part of what they want?
- o How will the subject respond?

#### Viability:

- o Compare Objective of Subject to Resulting Impact:
- Does the resulting impact align with the objective of the subject?
- What are the repercussions of success, failure, or partial success?
- What are the next steps, or what would happen next in each case?

# **Identifying Gaps with UXinv**

We will evaluate our understanding based on information in the model to identify gaps in our understanding. It can be helpful to look for:

#### Measurement gaps:

- Considering each segment from the **Objective of User** to **Resulting Impact**, where do we lack the ability to measure?
- o Are we measuring in one way or multiple ways?

#### Measurement source diversity:

- Do all measurements come from just one source, or do we have multiple vantage points?
- Do measurements from multiple sources use the same methodology for counting?

#### Alignment of evidence:

Does evidence from available sources align? If not, how can we find what is true?

#### Always, sometimes, never:

- What statements in the model are absolute (always or never) or conditional (sometimes)?
- O When isn't this the case?
- o If this is not the case, does measurement help us know what alternative is true?
- What is the impact if we are wrong?

#### Detail gaps:

- What aspects of the model have we insufficiently populated?
- Have we accounted for mainstream behavior, shortfalls, alternatives, and surpluses?
- O What do we know we do not know?
- o Do we know who to ask or how to find out? Can we ask the subject?

# **Identifying Potential Opportunities with UXinv**

We can prepare an additional copy of the UXinv model to consider potential opportunities, which contemplates a future state that more optimally delivers the experience we want the subject to have. If we hope for the subject to have a more positive experience, we can consider how to reduce or eliminate the barriers and rough edges present in the original inventory. To further guarantee our desired result, we can consider hardening the experience to prevent or compensate for potential failure points. We should consider whether single ideas or groups of ideas may be best.

# **Updating an Existing UXinv Model**

Some environments allow or require a prior analysis to be revisited when conditions change. Make a new copy of the UXinv model to update an existing inventory. Include a date or versioning information on the inventory to allow identification of the newer copy. Make no changes to the original inventory.

Duplicate all still-relevant details from the original inventory to the new inventory. Do not duplicate details that have become inaccurate or irrelevant. Add new details to the new inventory as appropriate. Perform a new evaluation of misalignment and gaps for the new inventory.

Given updated information, it is possible for conclusions to change or to stay the same. Determine appropriate next steps if opportunities or recommendations have changed.

## **Working with Generative AI and UXinv**

Al is not one thing. It is dozens of technologies evolving with new versions, behavior, and underlying data. It is non-deterministic and can generate different outputs when given the same inputs. It may comply with its instructions. It may be firewalled from external data, refreshed periodically, or continuously accessing new information. It may contain biases within its weighting of information. It may produce viable and non-viable results, and it may not be possible to determine which we have been provided.

Prompt: Is this text accurate?

Response from ChatGPT 4o 2024-09-22:

Yes, the text is accurate in describing many key characteristics and challenges of modern AI systems.

#### **UXinv Modelling**

Prompt: Form a UXinv model for a purchaser of haute couture attempting to access an invitation-only brand ecommerce website, where the brand does not care who purchases from them but does not want to allow resellers.

Response from ChatGPT 4o 2024-09-22, ending summary omitted:

Here's how a **User Experience Inventory (UXInv)** model could be structured for a **purchaser of haute couture attempting to access an invitation-only brand ecommerce website**, where the brand does not care who purchases as long as they are not resellers:

Subject: Haute couture purchaser attempting to access an exclusive ecommerce site.

### Objective of Subject:

- What does the subject want or want to do?
  - The purchaser wants to buy exclusive haute couture items from the brand's invitation-only ecommerce website.

### Motivation of Subject:

- Why does the subject want to achieve this objective?
  - The purchaser may seek unique, high-end fashion for personal use, status, or luxury. The exclusivity adds allure.
  - They might also value limited-edition items and are motivated by the prestige associated with owning them.

### **Gating Criteria:**

- What barriers prevent the subject from acting on their motivations?
  - The site is invitation-only, so the purchaser needs an invite or special access.
  - There could be identity verification or rules to ensure the subject is not a reseller.
  - Purchasers may need to comply with certain purchase behaviors to avoid suspicion as a reseller.

#### **Conditions Present at Onset:**

- When the subject overcomes any barriers to action, what conditions are present, including any conditions they may want to change?
  - Once access is granted, the site may allow browsing and purchasing but with limitations on the quantity or type of items.
  - Restrictions on returns or resale may be in place, impacting the subject's actions.

# **Actions Subject to Perform:**

- What actions will the subject take to get what they want?
  - Obtain or request an invitation to the ecommerce site.
  - Navigate through the site to select the desired haute couture items.
  - Complete the purchase through approved payment methods.

#### Interfaces:

- What systems, people, tools, etc., will the subject interact with to perform these actions?
  - The ecommerce website, possibly through a personal account or invitation code.
  - Payment systems, which could include luxury brand-specific payment methods or high-end financial services.
  - Customer support or live assistance, especially if access issues arise or additional authentication is needed.

#### **Success Measurement:**

How will the subject measure their success?

- Successful purchase of the desired items without facing any blocks or restrictions.
- Receiving the haute couture items within a reasonable time frame.
- The absence of any challenge from the brand regarding reselling.

# **Supports:**

- What training, documentation, support, accomplices, supporters enable successful use of the interfaces?
  - Luxury brand support documentation, potentially exclusive FAQs or help tailored to high-end clientele.
  - Personalized customer service for invitation holders.
  - VIP support, either online or via phone.

# **System Events Triggered:**

- When the subject takes actions, what response is triggered in the system, including responses visible or non-visible to the subject?
  - The system could log and verify user activity for signs of reseller behavior (e.g., high purchase quantities or certain buying patterns).
  - Authentication events such as logging the invite or verifying the purchaser's credentials.
  - Notifications to the brand regarding potential reseller behavior for further monitoring.

# **Transitions or Changes Occurring:**

- What impact on conditions will be caused by the subject's actions?
  - The brand may change or adapt access if the subject exhibits behaviors aligned with resellers (multiple large purchases, attempts to resell).
  - Completing the purchase may trigger a record in the brand's internal system for monitoring long-term buyer activity.

# **Limiting Constraints:**

- What rules restrict the actions that can be performed by the subject?
  - Purchase limits, such as restrictions on the number of items bought or specific purchase behaviors to prevent bulk-buying.
  - Prohibition of returns in some cases, especially for buyers flagged as potential resellers.
  - Specific terms of service limiting reselling or requiring certain usage of purchased items.

### Variability of Behavior:

- What variability can exist in the behavior of the subject's actions, such as quantity, size, color, material, duration, delay, interruptions, participants, destination, sequence, or session count?
  - The subject may want to buy multiple items but face restrictions on quantity per purchase or time limits between purchases.
  - Delays or interruptions in access to the site could happen if the subject is flagged as potentially engaging in resale.
  - Buying habits (quantity, frequency, item type) could be scrutinized for patterns aligned with resellers.

# **Resulting Impact:**

- What is the result produced?
  - If the subject successfully completes the purchase, they obtain the haute couture item for personal use.
  - If flagged as a reseller, the subject might lose access to the site or face account restrictions.

Commentary: It is noteworthy that ChatGPT did not consider basic ecommerce factors such as supply limitations, the availability of funds to the purchaser, or the impact of delivery delays.

### **Misalignment Identification**

Prompt: Based on the UXinv model details, assess misalignment.

Response from ChatGPT 4o 2024-09-22:

Based on the **User Experience Inventory (UXInv)** model for a haute couture purchaser accessing an invitation-only ecommerce website, several potential **misalignments** can be identified between the purchaser's expectations and the brand's actions to avoid resellers.

### 1. Measurement Misalignment

- Internal vs External Measurement:

- The purchaser's success is measured by the ability to purchase exclusive items. They
  may see success in acquiring as many items as possible, especially if they value
  collecting multiple pieces.
- The brand, however, measures success by ensuring the purchaser is not a reseller. They
  may impose restrictions on the number of purchases or closely monitor buying behavior.
  This difference in success criteria (purchasing vs. preventing resellers) can lead to
  frustration for buyers who aren't resellers but are still restricted.

#### - Partial Success:

 If a purchaser is limited to buying fewer items or is flagged as suspicious, they might perceive their experience as unsuccessful, even if they manage to purchase some items.
 The brand's need to ensure exclusivity could feel restrictive or unfair to the purchaser.

# 2. Usability Misalignment

#### - Interface vs Supports:

- The exclusivity of the invitation-only website can create usability challenges. If the ecommerce system flags legitimate users as potential resellers based on buying patterns (e.g., purchasing multiple items), the buyer could face unnecessary roadblocks or even account bans.
- Adequate support needs to be in place to help users navigate these issues. If a
  legitimate buyer faces restrictions but lacks support to resolve the issue, they might
  become frustrated and abandon the purchase process. The interface could place a high
  cognitive load on buyers, especially if the system's rules for identifying resellers are
  opaque.

# 3. Visibility Misalignment

#### Actions vs System Events:

- The purchaser might not be aware that their actions are being monitored for potential reseller behavior. For example, purchasing too many items at once or making frequent purchases could trigger system events that the buyer cannot observe. This lack of visibility could lead to confusion if they suddenly face restrictions or lose access.
- On the brand's side, these system events are critical to maintaining exclusivity, but the lack of transparency for the purchaser could cause a disconnect between their actions and the outcomes they experience.

# 4. Augmentability Misalignment

#### Conditions at Onset vs Transitions:

 Purchasers may not be able to adjust their actions if they don't know the thresholds for triggering reseller checks. For instance, a buyer might assume they can purchase

- multiple items or make frequent purchases, only to be flagged by the system unexpectedly.
- If the brand does not clearly communicate the conditions under which purchasing limits are enforced or the exact triggers for reseller checks, it limits the purchaser's ability to change behavior and avoid being flagged.

# 5. Understandability Misalignment

### Gating Criteria vs Limiting Constraints:

- The rules that restrict reseller behavior, such as purchasing limits or account monitoring, may not be fully visible or understandable to the purchaser. If the brand doesn't clearly communicate the rules (e.g., max number of purchases allowed, behaviors associated with reselling), the purchaser may unknowingly violate them.
- This lack of clarity can lead to confusion and frustration, especially if the user is restricted without understanding why or how to prevent it in the future.

### 6. Consistency Misalignment

### Motivation vs Variability of Behavior:

- The purchaser's motivation is to access exclusive, high-end fashion, but their ability to purchase may be inconsistent depending on brand-imposed constraints. A buyer may want to purchase several items, perhaps as gifts or to complete a collection, but if the system restricts them based on perceived reseller behavior, it leads to inconsistency in their experience.
- This misalignment between what the purchaser wants and what the system allows can create dissatisfaction. The more the brand imposes restrictions without clear reasons, the more the purchaser feels alienated.

# 7. Viability Misalignment

#### - Objective vs Resulting Impact:

- The objective of the purchaser is to acquire haute couture items, while the brand's objective is to ensure that the purchaser is not a reseller. If the brand misidentifies a legitimate buyer as a reseller, the impact could be severe—account restrictions, blocked purchases, or even loss of access to the site.
- If the purchaser fails to meet the brand's expectations, even though they are a legitimate buyer, it could result in a negative experience, loss of trust in the brand, and abandonment of future purchases.

# **Summary of Misalignments:**

- 1. **Measurement**: The brand's focus on preventing resellers can undermine the purchaser's goal of acquiring multiple items, leading to partial or perceived failure.
- 2. **Usability**: Lack of transparency in the system's monitoring of reseller behavior, coupled with insufficient support, can frustrate legitimate buyers.
- 3. **Visibility**: System responses to potential reseller behavior may be hidden, leaving the purchaser confused when restrictions occur.
- 4. **Augmentability**: Purchasers may not have enough information to adjust their behavior and avoid being flagged as resellers.
- 5. **Understandability**: The gating criteria and limiting constraints may not be fully communicated, leading to unintentional rule violations.
- 6. **Consistency**: The variability in the system's restrictions can prevent purchasers from fulfilling their motivation to buy exclusive items.
- 7. **Viability**: Misidentifying legitimate buyers as resellers can result in restricted access and dissatisfaction, harming the brand's reputation among genuine customers.

#### **Recommendations:**

To resolve these misalignments, the brand should:

- **Increase Transparency**: Clearly communicate the reseller prevention rules, such as purchase limits and account monitoring criteria.
- **Improve Support**: Offer robust customer support that can quickly resolve issues if legitimate purchasers are mistakenly flagged as resellers.
- Provide Feedback: Make system events more visible so buyers know when and why their behavior is being monitored or restricted.
- Adjust Flexibility: Allow purchasers to adjust their behavior by providing clear guidelines on how to avoid reseller-like actions.

Commentary: ChatGPT fixated on the anti-reseller aspects of this situation and did not more broadly consider other misalignment. This highlights the importance of having a Human-in-the-Loop to identify critical analytic gaps. A human could provide additional prompts to address limitations in the original response.

#### **Gaps Identification**

Prompt: Where could gaps exist?

Response from ChatGPT 4o 2024-09-22:

In the **User Experience Inventory (UXInv)** model for a purchaser of haute couture attempting to access an invitation-only ecommerce website where resellers are restricted, gaps could exist in several key areas. Identifying these gaps is essential for improving the alignment between the purchaser's experience and the brand's objectives. Here's an assessment of where gaps could exist:

## 1. Measurement Gaps:

- Objective to Resulting Impact:
  - The brand might not have a clear method for measuring the effectiveness of its reseller detection system. If legitimate purchasers are being flagged as resellers, there may be a gap in measuring whether the right customers are successfully completing purchases.
  - There could also be a gap in how success is measured for the purchaser. For instance, does the purchaser consider getting fewer items than desired a success? Is the system measuring their satisfaction, or just whether a transaction was completed?

#### Diversity of Measurement Sources:

- The brand may rely on limited data points (e.g., frequency of purchases or purchase quantity) to identify resellers. This could create a gap in measurement, as relying solely on these metrics might miss other important behaviors or lead to false positives.
- Measurements might come primarily from internal systems, but not from customer feedback or engagement metrics that show how satisfied legitimate buyers are with the process.

### 2. Information Gaps:

- Understanding of Gating Criteria:
  - Purchasers might not fully understand what qualifies them as resellers. If the brand doesn't clearly communicate the gating criteria (e.g., purchase limits, patterns to avoid), there's a gap in the purchaser's ability to understand and navigate the system without being mistakenly flagged.
- Visibility of System Events:

The system may trigger events or actions (e.g., restricting accounts or limiting purchases), but these may not be visible to the purchaser. There's a gap in the transparency of these system actions, leaving purchasers unsure about why certain restrictions are being applied or how to avoid them in the future.

### - Missing Evidence Alignment:

The brand might not have all the evidence it needs to accurately differentiate between legitimate buyers and resellers. For instance, if the system only tracks purchase quantity or frequency without considering other behavioral factors, there's a gap in the alignment of evidence used to make decisions about resellers. Misalignment of evidence can lead to false positives or unnecessary restrictions.

### 3. Detail Gaps:

### - Incomplete Model Population:

- The brand might not have fully populated critical components of the UXInv model. For
  example, if the support system for legitimate buyers is underdeveloped or if the system's
  behavior in response to certain actions (like high-value purchases) is not well
  understood, gaps exist in the detail level of the experience.
- Actions and Conditions: The brand may not have fully considered all the possible actions
  a purchaser could take (e.g., gifting items to family or buying for a collection) and how
  those actions may be misinterpreted by the system.

### - What's Unknown:

The brand might not know why some legitimate buyers are getting flagged as resellers or how they feel about the restrictions placed on them. There may be a gap in **customer feedback** or direct communication with users to understand how they perceive the system and its limitations.

# 4. Support Gaps:

#### - Training and Documentation:

- There may be insufficient documentation or customer support to help purchasers who
  are flagged by the system. If legitimate buyers encounter issues, they may not have
  access to clear instructions or assistance to resolve these issues quickly, leading to
  frustration.
- There could be a gap in the brand's ability to provide **real-time support** to legitimate purchasers who experience restrictions due to reseller suspicion.

# 5. Reseller Detection Gaps:

### Limitations of System Monitoring:

 The system used to identify resellers may be too simplistic or rely on easily manipulated factors (e.g., purchase frequency, account history). There could be a gap in the brand's ability to accurately differentiate **behavioral nuances** between legitimate high-end purchasers and resellers.

### - Lack of Dynamic Updating:

 As purchasing patterns evolve or resellers become more sophisticated in disguising their behavior, there may be a gap in the system's ability to adapt. The brand might not have a process for regularly updating or improving its detection criteria, leading to outdated or ineffective methods of monitoring.

### 6. Experience Gaps:

#### Usability and Cognitive Load:

- The website may be overly complicated for legitimate purchasers, especially when
  restrictions or reseller detection mechanisms are applied. There could be a usability gap
  if the system creates unnecessary friction for legitimate users trying to navigate the site
  or complete their purchases.
- Cognitive load could be too high if users have to manage multiple steps to verify their legitimacy as buyers without clear guidance or support.

# 7. Opportunity Gaps:

#### - Improvement of Future State:

- The brand might be missing opportunities to **optimize the experience** for legitimate purchasers by better tailoring the ecommerce flow or providing more flexible rules for high-end buyers. There's a gap in how the brand could harden the system to detect resellers without negatively impacting real customers.
- There could be missed opportunities to reward legitimate purchasers who regularly buy items, such as through loyalty programs or tiered access, which would help create a more positive experience while reducing the focus on preventing reselling.

#### **Summary of Gaps:**

 Measurement Gaps: Lack of diverse or adequate data sources and metrics for assessing both success and reseller activity.

- 2. **Information Gaps**: Purchasers may not fully understand reseller prevention criteria, nor are they aware of why their behavior triggers restrictions.
- 3. **Detail Gaps**: Incomplete understanding of buyer behavior and lack of clear communication about system actions and restrictions.
- 4. **Support Gaps**: Insufficient support for legitimate buyers who face unnecessary restrictions or misunderstandings.
- 5. **Reseller Detection Gaps**: Simplistic or outdated detection mechanisms that may falsely flag legitimate users.
- 6. **Experience Gaps**: Poor usability and high cognitive load for legitimate purchasers trying to complete transactions without reseller flags.
- 7. **Opportunity Gaps**: Missed chances to optimize the system for future improvements that benefit legitimate buyers while managing reseller activity more effectively.

By addressing these gaps, the brand can better align with both its own objectives and the purchaser's experience, leading to a more seamless, rewarding process for legitimate buyers while still effectively managing resellers.

#### **Potential Opportunity Identification**

Prompt: Prepare a future state UXinv model which integrates improvements to the customer experience.

Response from ChatGPT 4o 2024-09-22:

Here is a **future state User Experience Inventory (UXInv)** model that integrates improvements to enhance the experience for legitimate haute couture purchasers on the invitation-only ecommerce website while maintaining restrictions against resellers. This future state aims to address the gaps and misalignments identified in the current model.

Subject: Haute couture purchaser accessing the invitation-only ecommerce website with enhanced customer experience and anti-reseller mechanisms.

# **Objective of Subject:**

- What does the subject want or want to do?
  - The purchaser seeks to buy exclusive, high-end haute couture fashion items easily and confidently from the brand's website without facing unnecessary friction or restrictions.

# **Motivation of Subject:**

- Why does the subject want to achieve this objective?
  - They desire unique and prestigious fashion pieces for personal use, status, or collection, motivated by the exclusivity and high-quality design.
  - They value the ability to shop with ease and efficiency, enjoying a seamless and luxury-focused experience that aligns with the brand's exclusivity.

## **Gating Criteria:**

- What barriers prevent the subject from acting on their motivations?
  - Access is still invitation-only, but with clear, transparent pathways for obtaining access (e.g., through high-spender loyalty or direct contact).
  - The system checks for reseller behavior, but the criteria are communicated clearly in advance, allowing legitimate buyers to avoid crossing the thresholds accidentally.

#### Conditions Present at Onset:

- When the subject overcomes any barriers to action, what conditions are present, including any conditions they may want to change?
  - Once the subject is invited, they enter a personalized experience tailored to their status as a legitimate customer, with a frictionless buying journey.
  - Conditions include reduced friction for trusted buyers, with clear feedback if any restrictions apply and an explanation of how to address them.

# **Actions Subject to Perform:**

- What actions will the subject take to get what they want?
  - Log in via invitation, browse, and purchase high-end fashion items with confidence that their purchases won't be restricted if they follow the brand's clear guidelines.
  - Contact VIP support if they have any questions or concerns about potential restrictions or reseller flags.
  - Join a loyalty program to gain further benefits, increasing their status and reducing any limitations they might face in future purchases.

### Interfaces:

- What systems, people, tools, etc., will the subject interact with to perform these actions?
  - A user-friendly, streamlined ecommerce platform that prioritizes ease of use for legitimate buyers, with intuitive navigation and personalized recommendations.
  - Clear, immediate communication through real-time notifications explaining any restrictions and how to resolve them, with VIP customer service support available via chat or phone.
  - Dynamic prompts if potential reseller behavior is detected, offering ways to correct or clarify their actions in real time.

#### Success Measurement:

- How will the subject measure their success?
  - Smooth, unrestricted purchase of desired items without delays or confusion about reseller detection.
  - Receiving the purchased haute couture items without concerns about future access restrictions or being flagged by the system.
  - Continuous ability to purchase high-end items, knowing that their legitimate buyer behavior is recognized by the brand.

### **Supports:**

- What training, documentation, support, accomplices, supporters enable successful use of the interfaces?
  - Detailed onboarding materials provided with the invitation, explaining purchase limits, restrictions, and how to avoid being flagged as a reseller.
  - Dedicated, high-quality customer support available 24/7 for VIP members, including personalized account managers for repeat or high-spending customers.
  - A loyalty program that provides further support, such as additional purchase privileges, early access to sales, and concierge services for top-tier purchasers.

# **System Events Triggered:**

- When the subject takes actions, what response is triggered in the system, including responses that are either visible or non-visible to the subject?
  - If the system detects reseller-like behavior (e.g., buying multiple high-value items in a short time), it triggers a **real-time warning** visible to the purchaser, explaining the

- behavior that could be flagged and offering the chance to adjust their actions (e.g., canceling or modifying the order).
- Purchase patterns that align with legitimate buyer behavior (e.g., spacing out high-end purchases) trigger **positive reinforcement** in the form of loyalty points, special offers, or access to limited-edition items.

## **Transitions or Changes Occurring:**

- What impact on conditions will be caused by the subject's actions?
  - If the subject adheres to the reseller-prevention guidelines, they enjoy unrestricted access to future purchases.
  - If a potential reseller flag is triggered, the system transitions to offer corrective actions in real time, such as suggesting alternative purchasing methods or offering a direct support line to resolve the issue immediately.
  - Participation in loyalty programs may cause enhanced access, such as early shopping windows or increased purchasing limits.

## **Limiting Constraints:**

- What rules restrict the actions that can be performed by the subject?
  - Purchase limits and quantity restrictions remain in place but are flexible for verified, legitimate buyers. These restrictions are clearly communicated upfront so the buyer knows their limits.
  - Resale restrictions still apply, but buyers receive clear guidance on how these restrictions work and why they exist. Special offers or warnings prevent legitimate buyers from being unnecessarily flagged.

### Variability of Behavior:

- What variability can exist in the behavior of the subject's actions, such as quantity, size, color, material, duration, delay, interruptions, participants, destination, sequence, or session count?
  - The system allows greater flexibility for verified buyers to purchase larger quantities or more expensive items without triggering flags.
  - Legitimate buyers can vary their purchase patterns (e.g., buying gifts or personal collections) without fear of being wrongly classified as resellers, thanks to smart behavior analysis integrated into the system.

# **Resulting Impact:**

- What is the result produced?
  - Legitimate buyers can complete purchases without facing restrictions, knowing they are recognized as valuable, trusted customers.
  - Resellers are still blocked by the system's smart checks, but the legitimate purchaser's experience is enhanced with real-time guidance, loyalty rewards, and clearer feedback on actions taken.
  - The brand maintains exclusivity, but improves overall customer satisfaction by balancing anti-reseller policies with a smoother, more luxury-focused purchasing experience.

## Identifying Misalignment with UXInv (Future State)

- Measurement: Success for both the purchaser and the brand is better aligned. The purchaser's success (getting their haute couture items) aligns with the brand's success in blocking resellers while allowing legitimate buyers to thrive. Clear metrics are in place to measure both.
- Usability: The user interface is now intuitive and fully supported by documentation and customer service. The cognitive load is reduced, and real-time prompts help users correct any actions that might mistakenly resemble reseller behavior.
- **Visibility**: The system now offers real-time feedback on system events. If a purchaser's behavior could trigger a reseller flag, they are informed in the moment and provided corrective steps.
- Augmentability: Purchasers are empowered to adjust their behavior in real-time. The system
  offers options to change the purchase process, preventing unnecessary flags or restrictions, and
  allowing for more flexibility.
- **Understandability**: All reseller-prevention rules are clearly explained upfront, and the system offers ongoing visibility into purchasing limits or behaviors that could trigger restrictions.
- Consistency: Purchasers can consistently buy items based on their status, thanks to smart system checks that differentiate between legitimate buying patterns and reseller activity.
- Viability: The system is better tuned to reward legitimate buyers with a positive experience while restricting resellers. Legitimate users can shop freely and understand the impact of their actions.

# **Future Improvements Summary:**

- Clearer communication on reseller detection criteria and feedback mechanisms to help users avoid triggering system restrictions.
- Dynamic real-time guidance allowing buyers to adjust actions if potential reseller flags are triggered.
- **Enhanced loyalty programs** that reward legitimate buyers, making them feel valued and encouraging repeat business.
- Flexible restrictions that adapt to verified customer behavior, allowing more purchasing freedom for legitimate buyers.
- Streamlined support with VIP-level customer service, ensuring that issues are resolved quickly and efficiently.

This future state UXInv model integrates all these improvements, enhancing the overall customer experience while maintaining the brand's anti-reseller objectives.

Commentary: It is noteworthy that even in the improved experience, ChatGPT answers were fixated on the original framing of the problem rather than the total experience. ChatGPT has not considered the full details critical to the purchasing experience, such as funds and website reliability.

The model could be enhanced with further guidance and multiple rounds of improvement. Absent improvements to the model and deeper evaluation of gaps, blind spots, and errors could result.

Whether generated by a human or AI, analytic quality should be assessed before trusting conclusions. Measurement, User Testing, User Acceptance Testing, Quality Assurance, and Risk Management are vital in increasing the likelihood of successful implementation of change.

# **Suggested Resources**

- NASA-TLX (Task Load Index), https://humansystems.arc.nasa.gov/groups/TLX/
- KLM-GOMS, https://www.usabilitybok.org/klm-goms
- "Structured Analytic Techniques for Intelligence Analysis", 3rd ed., Pherson and Heuer
- Mairiza, Dewi & Zowghi, Didar & Nurmuliani, Nur. (2010). Towards a Catalogue of Conflicts Among Non-functional Requirements.. 20-29.
- "How I Developed the 10 Usability Heuristics", Nielsen, https://jakobnielsenphd.substack.com/p/usability-heuristics-history
- Don Norman's "Human action cycle", https://en.wikipedia.org/wiki/Human\_action\_cycle
- John Boyd's "OODA Loop", https://en.wikipedia.org/wiki/00DA\_loop
- Additional UXinv materials are available at zerotrack.net including a comparison of UXinv to
  other techniques and consideration of complementary techniques, the example exercise
  performed with other AI models, and UXinv model images.

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The canonical home for information about User Experience Inventory is https://zerotrack.net/

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