Consumer-Authorized AI Agents: Defining Early Use Cases

The rise of consumer-authorized AI agents will transform how individuals engage in the market — changing the way consumers discover, evaluate, purchase, and manage relationships with brands, merchants, and others. In an effort to help shape this transformation, Stanford and Consumer Reports are proposing a set of foundational use cases to focus the initial prototypes the working group builds together.

We designed these use cases around a complete customer journey. Though not exhaustive, we believe this journey will be compelling to consumers, feasible for businesses, and compatible with today's identity, authentication, and payment infrastructure. The use cases ladder up to an umbrella user story, but will be developed out-of-sequence as atomic units that build on each other. Once this user journey is fully prototyped, we will move on to more complex customer journeys and use cases.

Customer Journey

"My old dishwasher finally gave out, and I wanted a replacement fast. I asked my AI agent to help me find top-rated models based on Consumer Reports' testing, something energy efficient that fit the dimensions of my kitchen.

After reviewing a shortlist and comparing prices, I chose a highly rated model that could be delivered within the week: the Dishwhiz 9000. I asked my agent to order the dishwasher from a major retailer and schedule the delivery for this weekend.

After the installation, I noticed a musty smell and inconsistent drying. I asked my AI agent to send feedback to the manufacturer describing the issue. They responded with a cleaning procedure and suggested checking the rinse aid level.

Later, I wanted to double-check the return policy and whether I was still eligible to return this model if the problem continued. My agent retrieved the return policy from the manufacturer and confirmed that the model was still eligible for return based on my purchase date.

After a few more days of no improvement, I decided I'd rather return this dishwasher and go with a different model. My AI agent initiated the return process with the retailer and helped schedule the pickup. I saw the refund appear on my credit card, and the pickup happened on time.

Then I asked my agent to help me choose a better-rated alternative from the original CR shortlist, clarifying that I'd be willing to spend a bit more for higher reliability. I also made sure my CR agent knew about the issues I had with this dishwasher, so that other members could take my experience into account."

Use Case 1: Consumer researches options for a purchase

User story: *"My old dishwasher finally gave out, and I wanted a replacement fast. I asked my AI agent to help me find top-rated models based on Consumer Reports' testing, something energy efficient that fit the dimensions of my kitchen."*

Agent story: Agent considers preference and priorities of consumer, then retrieves product data from CR and overlays it with commercial availability and price.

Exhibits: structured data retrieval from trusted third-party (CR), preference-based ranking & filtering

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Use Case 2: Consumer makes a purchase

User story: "*After reviewing a shortlist and comparing prices, I chose a highly rated model that could be delivered within the week: the DishWhiz 9000. I asked my agent to order the dishwasher from a major retailer and schedule the delivery for this weekend."*

Agent story: Agent makes the purchase from retailer via the user's credit card, and schedules the delivery to their home address this weekend.

Counterparty story: Retailer lets the agent access the site, and make a purchase on the user's behalf.

Exhibits: sharing of identity, delivery, and payment credentials, transaction authorization & confirmation, funds transfer from consumer to business

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Use Case 3: Consumer submits feedback to company

User story: "*After the installation, I noticed a musty smell and inconsistent drying. I asked my AI agent to send feedback to the retailer describing the issue. They responded with a cleaning procedure and suggested checking the rinse aid level."*

Agent story: Agent initiates contact with the retailer, passing along a description of the issue.

Counterparty story: Retailer logs the issue in their system (optional: attributes feedback to user), responds with relevant FAQ content.

Exhibits: agent-to-business communication channel, authentication with business, write to company feedback endpoint

Use Case 4: Consumer inquires about their account

User story: "*Later, I wanted to double-check the return policy and whether I was still eligible to return this model if the problem continued. My agent retrieved the return policy from the manufacturer and confirmed that the model was still eligible for return based on my purchase date."*

Agent story: Agent inquires with the retailer about the purchase date and return policy, applying logic to determine that this purchase is still within a valid return window.

Counterparty story: Counterparty confirms that the agent is authorized to access the information, pulls up the user profile, reads purchase date and model, and retrieves details on the return policy for this item.

Exhibits: Agent-initiated account lookup, scope-limited authenticated data retrieval, response parsing from structured or semi-structured source, application of policy logic on transaction.

Use Case 5: Consumer makes a return

User story: *After a few more days of no improvement, I decided I'd rather return this dishwasher and go with a different model. My AI agent initiated the return process with the retailer and helped schedule the pickup. I saw the refund appear on my credit card, and the pickup happened on time.*

Agent story: Agent initiates a return with the retailer and schedules pickup. After pickup, agent facilitates reimbursement and money moves from the retailer back to the consumer.

Counterparty story: Receives agent's return request, verifies the original transaction, checks that product is within the return window, approves the return, schedules a pickup with its logistics partner, initiates refund. Once the product is collected, funds are credited back to the consumer's original payment method.

Exhibits: Agent-initiated refund request, funds transfer from business to consumer

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Use Case 6: Consumer researches options for a purchase – with feedback

User story: *Then I asked my agent to help me choose a better-rated alternative from the original CR shortlist, clarifying that I'd be willing to spend a bit more for higher reliability. I also made sure my CR agent knew about the issues I had with this dishwasher, so that other members could take my experience into account."*

Agent story: Agent logs user feedback on the recent purchase, and notes new user preferences. Agent then retrieves product data from CR and overlays it with commercial availability.

Exhibits: User preference update, feedback submission to agent, new data retrieval & re-ranking

Implementation Path

While the use cases are presented as a cohesive consumer journey, development will proceed in a modular, technically progressive fashion. We will sequence implementation based on technical complexity—starting with unauthenticated agent tasks and gradually layering in authentication, permissioned data access, and transactional flows.

Our development goal is to build reusable primitives that can support many types of interactions over time. By starting simple and building outward, we will lay a foundation for more complex agentic interactions.

Development Roadmap		
Use case	**Complexity**	**Notes**
Researching a Purchase (UC1)	Low	Read-only, unauthenticated MVP that does not involve a counterparty when managed by CR
Submitting Feedback (UC3)	Low/Medium	Atomic, one-way write interaction that can be unauthenticated or authenticated. Introduces customer lookup logic but avoids the complexity of reading account data or managing transactions.
Inquiring About an Account (UC4)	Medium	Requires the agent to securely access customer data—which requires scope-based permissions.
Making a purchase (UC2)	Medium/High	Introduces financial risk and needs robust confirmation. Involves payment gateways, cart systems, identity verification.
Executing a Return (UC5)	High	Involves conditional logic (return window, refund eligibility), coordination with both retailers and logistics systems, and reconciliation of payment and fulfillment records.
Researching with Feedback (UC6)	Low	Lower priority.

We have already delivered Researching a Purchase (UC1) for CR members on ask.cr, so will commence development with Submitting Feedback (UC3).

Our development exercise will focus on “happy paths,” or the ideal version of each task working as intended. We will deliver an evaluation suite to confirm the system performs as expected, and make note of “unhappy paths” as we identify them, so that they can be considered and developed against in future.

Our foundational use cases are transactional, meaning they focus on task completion and do not accommodate negotiation. We would like to explore agent-driven negotiation once transactional flows have been established. The use cases also presume a single consumer agent and do not accommodate multi-agent interactions – though we consider agent-to-agent and multi-agent systems to be areas ripe for future investigation.

Appendix - Additional Use Cases

Two more transactional use cases were submitted by the working group: **consumer schedules services** and **consumer coordinates services**. These UCs are not on the critical path for the customer journey we selected, though we may choose to develop against them once this user journey is complete.