CHAPTER 14

CONSUMER BEHAVIOUR, MARKET RESEARCH, AND CUSTOMER INTELLIGENCE

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PARENT BOOK
The Business Enterprise: Core Functions, Integrated Management, and Emerging Transformations
https://doi.org/10.65655/ocp.m30

VOLUME EDITOR AND PUBLISHER
Prof. Dr. Placide MUTABAZI
Open Christian Press, A publishing imprint of the Open Christian University and the Center for Faith and Work

PROPOSED CHAPTER DOI
10.65655/ocp.m30.c123

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ABSTRACT

The presence of customer data does not establish that an enterprise understands its customers. Purchases are shaped by constrained choice, habits, identity, social relations, institutions, information quality, channel architecture and the experience that follows acquisition; research about these processes is itself vulnerable to selection, measurement, causal and ethical errors. This chapter develops a critical account of consumer behaviour, market research and customer intelligence as complementary but nonidentical activities. A purposive secondary-source synthesis assesses consumer decision models, the theory of planned behaviour, prospect theory, social influence, innovation diffusion, survey methodology, qualitative inquiry, experimentation and customer-value analytics. Twelve approved sections examine purchasing contexts, psychological and sociocultural influences, the customer journey, digital environments, research design, qualitative and quantitative methods, CRM, retention economics, consumer protection and AI-mediated research. Official evidence from Rwanda's 2024 FinScope survey is interpreted alongside Kenya's 2024 FinAccess findings without treating financial inclusion as online purchasing prevalence. Original contributions include an evidence-linked customer-journey model, a source-to-decision research protocol, metric definitions, an auditable cohort-retention example, and a Rwanda-based secondary-data research design for an illustrative service enterprise. The governing argument is that defensible customer intelligence requires behavioural explanation, fit-for-purpose evidence, accountable data governance and cross-functional action. It must remain open to correction, represent noncustomers and vulnerable consumers fairly, and distinguish observed relationships from experimentally identified effects. The proposed synthesis is conceptual and pedagogical, not a newly validated causal model.

Keywords: consumer behaviour; decision journeys; behavioural economics; social influence; market research; survey validity; customer relationship management; cohort retention; customer lifetime value; Rwanda.

LEARNING OUTCOMES AND CONCEPTUAL ROADMAP

On completing this chapter, readers should be able to (LO1) distinguish consumer, household, organizational and institutional purchasing and identify their decision roles; (LO2) critically evaluate psychological, social, cultural and digital explanations of consumer decisions, including their limitations; (LO3) map an evidence-informed customer journey with its cross-functional dependencies; (LO4) formulate a feasible research question, suitable secondary-source strategy and explicit inference limits; (LO5) evaluate qualitative, survey,

observational and experimental research for validity, sampling, bias and ethics; (LO6) design a proportionate first-party customer-information and CRM governance system; (LO7) calculate, interpret and challenge satisfaction, retention, churn and customer-lifetime-value measures using disclosed assumptions; and (LO8) defend an ethically responsible evidence-to-action plan for a Rwandan service provider with an international comparator.

The intellectual sequence moves from who buys and why (Sections 14.1–14.3), through the sequential and recursive customer experience (14.4–14.5), to the architecture of credible research (14.6–14.8), the organization and interpretation of customer records (14.9–14.10), and the limits established by rights, fairness and emerging technologies (14.11–14.12). Sections 14.13–14.17 connect Rwandan evidence, comparative application, cross-functional integration, a research agenda, educational exercises and references. Chapter 13 has already established market orientation and marketing strategy; Chapter 15 owns product, branding and pricing decisions, while Chapter 16 owns sales, communication, channels and campaign execution. The present chapter therefore studies customers and the evidentiary warrant for decisions, without reassigning those neighboring subjects.

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14.0 INTRODUCTION: A TRANSACTION DOES NOT EXPLAIN A CUSTOMER

Consider an illustrative Kigali provider offering a subscription-based household water-delivery and refill service. Its founder reports rising registrations after customers are invited to pay through mobile money. An analyst concludes that digital payment creates loyalty and recommends making all transactions cashless. Yet repeat orders differ sharply by neighborhood; some households share telephones, some customers register only to obtain an introductory discount, and some customers continue the service because alternatives have disappeared. Sales records reveal what registered accounts did, not necessarily who used the service, why a household selected it, whether excluded people would have wanted it, or whether digital payment caused repeat purchasing. This constructed case is not a study of an identified company. It exposes the central distinction between transactional visibility and consumer understanding.

Consumer behaviour concerns the situated processes by which persons and organizations recognize problems, interpret information, acquire, use, evaluate, share and discontinue offerings. Market research is the systematic design and appraisal of evidence to answer specified market questions. Customer intelligence is the governed transformation of relevant observations into contestable insights and decisions. Their intersection is substantial, but the terms are not synonymous. Psychological theory can suggest a mechanism without documenting its prevalence. A survey can describe attitudes without revealing actual purchases. A customer database can be operationally accurate while systematically excluding people who never registered. A randomized experiment may identify the effect of one interface change without explaining how that effect would transfer to another region or population (Bettman et al., 1998; Lemon & Verhoef, 2016; Kohavi et al., 2020).

Three intellectual commitments guide this chapter. First, consumer choice is neither a fully autonomous act of stable preference maximization nor an entirely manipulable output of marketing stimulus. Agency operates under financial, cognitive, institutional, cultural and technological constraints. Second, research quality is inferential: what matters is whether the design can support the precise claim managers wish to make. Third, commercial effectiveness does not settle ethical legitimacy. A profiling system can improve response rates yet infringe privacy, discriminate or exploit vulnerability. Responsible customer intelligence thus requires valid inference and justified conduct at the same time. These propositions extend the enterprise-system reasoning in Chapter 1 and the evidence discipline in Chapter 4 into the specialist marketing function.

14.0.1 Evidence strategy, philosophical position and limits

This chapter uses a targeted, critical synthesis of original scholarly works, selected peer-reviewed empirical and methodological research, official national datasets, and primary legal or professional documents. The documentary cut-off is 31 October 2026. Source checks focused on original publication records for planned behaviour, prospect theory, constructive choice, customer journeys, online reviews, thematic analysis, measurement bias, CRM and customer lifetime value; official Rwanda FinScope and Kenya FinAccess releases; Rwanda's personal-data law and 2026 consumer-protection legislation; and NIST's AI risk guidance. The search expressions reflected these concepts and exact source titles. Inclusion emphasized explanatory significance, contrasts among research designs, source authority, verifiable identifiers and relevance to the twelve approved subsections. This is not a systematic review or meta-analysis: no comprehensive database coverage, preregistered screening, estimated pooled effect size, unpublished interviews or original survey is claimed.

The chapter adopts a fallibilist approach to explanation. Descriptive transactional observations, expressed attitudes, experimentally estimated effects, cultural interpretation and moral appraisal answer different questions. A useful theory must state a mechanism and conditions under which its predictions might fail; an empirical finding must retain its population, measurement, period and design; and an illustration must disclose that its figures are invented. The Rwandan and Kenyan official indicators reported later describe access to or use of financial services, not customer acquisition for any named enterprise. The cohort and financial data below are hypothetical and reproducible arithmetically, not empirical estimates or company disclosures. This stratification prevents a persuasive figure from acquiring evidentiary authority it has not earned.

14.0.2 Intellectual history and the boundaries of consumer knowledge

Earlier economic models typically represented a consumer as choosing among feasible bundles according to preferences and a budget constraint. Their virtue is analytical clarity: substitution, purchasing power and relative prices matter. Their weakness, when treated as a complete psychology, is to assume away how preferences arise, how people search, and what social structures determine the feasible set. Behavioural research demonstrated context-sensitive valuation and departures from expected-utility benchmarks, while information-processing studies explained choice strategies under bounded attention. Sociological work emphasized identity, distinction, social relations and cultural meanings; organizational-buying research located purchasing decisions within role structures and procurement procedures (Kahneman & Tversky, 1979; Bettman et al., 1998; Webster & Wind, 1972).

Digital records intensified an older temptation to substitute what is measurable for what matters. Search histories, location traces and completed purchases can be abundant but fail to capture unaffordable options, shared devices, mistrust, deliberate privacy protection or the reasons for nonadoption. The resulting methodological problem is not solved by choosing between qualitative and quantitative research. It requires specifying constructs, populations, selection mechanisms, counterfactuals and decision uses. Economic

models, psychological theories and cultural interpretation should be placed in constructive tension, rather than assembled as an indiscriminate list of explanatory labels.

14.0.3 Epistemology, agency and the limits of commercial knowledge

Consumer inquiry involves at least three different objects of knowledge: what an individual reports, what an individual does in a specific situation, and what would have occurred under a different situation. These objects cannot be substituted without argument. Stated preferences may reveal meaningful values while remaining sensitive to wording and hypothetical stakes; observed transactions provide relatively strong evidence of executed choices but record only available offers and permitted participation; causal claims require an appropriate comparison between interventions. The philosophical error is to assume that greater observational precision necessarily produces a more complete understanding of the person. Data exhaust may be exact about time stamps and incomplete about opportunity, dignity and intention (Bettman et al., 1998; Hernán & Robins, 2020).

The ontological question is also consequential. Preferences may be treated as relatively stable dispositions, context-constructed responses, socially situated practices or aspirations constrained by institutions. These alternatives generate different explanations of nonpurchase. A stable-preference account asks whether the alternative provides sufficient marginal value; an information-processing account asks whether a buyer could compare it; a cultural account asks how identity and socially meaningful consumption shape the category; and an institutional account asks whether lawful access, payment instruments and service availability made purchase possible. A research programme that selects one account before inspecting rival mechanisms risks mistaking its preferred vocabulary for evidence. The chapter therefore adopts explanatory pluralism with a disciplined requirement: each explanation must generate a discriminating observation or explicitly state why such discrimination is currently impossible (Arnould & Thompson, 2005; Ajzen, 1991).

The normative status of consumer agency cannot be inferred from a conversion rate. A consumer who formally accepts a default subscription may be legally bound under specified circumstances, but that outcome does not demonstrate comprehension or fair choice. Equally, the absence of purchase does not imply incapacity to judge one's interests. Commercial research should seek information that makes offers more responsive to legitimate needs while preserving the consumer's capacity to reject, discontinue and challenge them. This approach differentiates the descriptive study of influence from the moral authority to influence, and is particularly important where household essentials, financial vulnerability or low-cost behavioral targeting make formal choice an inadequate measure of substantive freedom (Acquisti et al., 2016; Luguri & Strahilevitz, 2021).

14.1 CONSUMER DECISION CONTEXTS

14.1.1 Individuals, households and the distribution of decision roles

An individual purchaser may be the initiator, evaluator, payer, user and complainant in one transaction; the roles separate in many household purchases. A parent may initiate a school-transport search, an adolescent may influence the preferred provider, another adult may control the payment instrument, and several family members may use the service. For health, food, education, financial and utility services, the formally registered account holder may therefore differ from the affected user. Treating the account as the person makes behavioral inference unreliable and can obscure consent and vulnerability.

Consumer analysis must specify the unit of analysis. Purchase occasions, individuals, households, subscriptions and devices are not interchangeable denominators. If a household has two mobile-money wallets but buys one delivery service, two wallet identifiers should not become two customers. Equally, a service used by several household members can generate satisfaction or harm that the account holder never reports. In Rwanda, intergenerational support, shared transport and group-based finance may be relevant

empirical hypotheses; none should be asserted as a universal cultural rule without suitable evidence. A research design should identify who decides, who can veto, who pays, who experiences performance and who can seek redress.

14.1.2 Organizational and institutional buying

Business-to-business and institutional purchasing involves multiple roles, formal specifications, budgets, authorized signatures and downstream users. Webster and Wind (1972) describe organizational buying as an interaction among environmental, organizational, interpersonal and individual factors. A hospital's cleaning-service procurement may involve a technical evaluator, finance officer, procurement committee, compliance reviewer and employees who use the service. The lowest quoted price may not be preferred if continuity, safety or auditability is important. Public institutions can also face procedural obligations that differ from private purchasing, with implications for the source of information and the timescale of decisions.

The distinction between straight rebuy, modified rebuy and new task is analytically helpful: a routine replenishment may depend on reliable records and contract performance, whereas unfamiliar equipment may require expert evaluation and higher perceived risk. Yet these are classificatory aids, not natural laws. Supplier dependence, professional judgment, emergency procurement, corruption risk and information asymmetry can change the process. Managers should not extrapolate consumer-brand attitude measures to an institutional tender without asking who holds decision rights and which rules govern admissible evidence.

14.1.3 Services, necessity, risk and inclusion

Search and evaluation differ according to whether an offering is standardized, experiential, credence-intensive, frequently purchased, urgent or difficult to reverse. A prepaid mobile service has recurring use and measurable transactions; a diagnostic medical service has high informational asymmetry; a funeral service may be purchased under emotional pressure. Household liquidity and transaction costs can make even an attractive offering infeasible. Where sellers infer weak demand from low recorded adoption, they must distinguish lack of interest from lack of income, connectivity, documentation, mobility or trust. Sampling only current users produces a different question from sampling all potentially eligible households.

This distinction has direct managerial consequences. A customer-journey map for an institutional buyer must include approvals and contract implementation; a map for a household essential service must include accessibility, language, payment capacity and after-service remedy. An enterprise that treats these journeys as identical may optimize sign-ups while neglecting delivery, complaints or nonusers. Customer intelligence begins with correctly identifying the decision-making setting rather than selecting a software package.

14.1.4 Informal exchange, institutional constraints and observed demand

A market is not exhausted by transactions recorded within a formal digital platform. Consumers may purchase through neighbourhood shops, rotating savings arrangements, informal intermediaries and direct personal networks, all of which can affect the meaning of an observed market share or adoption rate. This is not a claim that informal channels are uniformly superior or inferior. Such arrangements may reduce search and access costs through trusted relationships while also limiting recorded quality assurance and formal remedy. Whether the balance is positive depends on a defined offering, price, risk and regulatory context. A formal enterprise using only electronic sales data would systematically underobserve these alternatives and could mistakenly characterize noncustomers as uninterested rather than differently served.

For empirical study, analysts should construct a choice-set audit before interpreting demand. The audit identifies available alternatives, total delivered cost rather than listed price alone, distance and time costs, supply reliability, language accessibility, documentary eligibility and control of the payment instrument. Its purpose is not to treat every factor as another explanatory variable in a large regression. Rather, it establishes whether a recorded nonpurchase is plausibly a choice among accessible options. Once access

constraints are recognized, sampling strategies and customer classifications can be designed around eligible persons and households rather than conveniently captured account holders.

14.2 PSYCHOLOGICAL INFLUENCES

14.2.1 Motivation, needs, cognition and perceived value

Motivation identifies forces making a goal salient; it does not guarantee a particular purchase. Needs such as food security, convenience, social belonging and financial safety interact with the available means and the meaning assigned to an offering. Perception filters stimuli through attention, expectations and existing knowledge. Two customers can encounter the same message yet infer different reliability or risk. Learning from direct experience, imitation and prior disappointments changes subsequent search and trust. Memory matters because recall is selective: a recently publicized failure can dominate numerous ordinary satisfactory transactions. These mechanisms render consumer knowledge situated and revisable rather than a fixed list of preferences.

Classical attitude models distinguish beliefs about an offering from affective evaluations and behavioral intention. In the theory of planned behaviour, attitudes toward the behavior, subjective norms and perceived behavioral control contribute to intentions; perceived control and intentions relate to performance where opportunities and skills permit (Ajzen, 1991). The model directs researchers to ask whether a prospective customer judges a service beneficial, anticipates approval, and believes that purchase is feasible. It does not license the inference that intention equals adoption. The intention–behavior gap can arise from changed circumstances, weak control, habitual alternatives and constraints not adequately measured (Sheeran, 2002). For cash-constrained buyers, a favorable attitude may coexist with an inability to pay.

14.2.2 Bounded rationality, constructed preferences and prospect theory

Bettman, Luce and Payne (1998) argued that people frequently construct preferences while making choices, adapting decision strategies to task complexity, time pressure and information format. This undermines the idea that every response to a survey reveals an enduring latent willingness to pay. A respondent forced to compare unfamiliar service bundles may produce a context-dependent ranking that changes under a different frame. The appropriate response is neither to abandon measurement nor to label consumers irrational, but to test stability, task comprehension, choice consequences and sensitivity to presentation.

Prospect theory offers a related but distinct account of risky choice. Kahneman and Tversky (1979) characterized evaluation relative to a reference point and documented asymmetries between gains and losses as well as nonlinear probability weighting. In customer decisions, a delayed delivery may be interpreted as a loss against a promised time rather than as an objective time interval; a temporary discount may reset reference expectations. These are hypotheses to assess in a specific category, not evidence that all consumers everywhere are loss averse to the same degree. The theory's original domain is risky choice, so translating it to marketing requires careful operationalization of reference points, probabilities and stakes.

14.2.3 Identity, habit, affect and ethical boundary conditions

Consumption can communicate identity, aspiration, membership or practical competence, but identities cannot be reconstructed reliably from a few clicks. Habit economizes attention in routine purchasing, creating inertia that could be mistaken for satisfaction. Affect can facilitate quick judgment, particularly under uncertainty, while raising sensitivity to fear-based messages and urgency cues. A household using the same mobile service for five years may display retention because of genuine value, a poorly understood exit process, scarce substitutes or interpersonal dependence. Customer research must test these alternatives rather than interpreting repeated transactions as unqualified endorsement (Oliver, 1999).

Psychological insight increases responsibility. Manipulating scarcity cues, overstating risks, disguising subscription conditions or relying on consumers' limited attention may generate an immediate conversion while violating informed choice. A practice should be evaluated through the accuracy of claims, the buyer's feasible alternatives, reversibility, proportionality and foreseeable harm. Ethical limits are thus part of the explanatory model: an intervention that changes behavior without enabling informed agency is not automatically a desirable improvement in marketing effectiveness.

14.2.4 Competing predictions and discriminating tests

The models reviewed above are not simply different names for the same consumer response. Under a rational budget-constrained interpretation, a rise in the delivered price should change demand through opportunity cost and substitution, with variation arising from income and available alternatives. The theory of planned behaviour predicts that feasible action depends partly on attitudes, perceived norms and perceived control; a buyer may endorse an offering yet fail to act where control is limited. Constructive-choice research predicts additional sensitivity to the decision procedure and representation of attributes. Prospect theory directs attention to reference-dependent losses and risks, particularly where a change is framed relative to an established expectation. Socially situated accounts examine how preferences are linked to relationships, identity and material institutions. These explanations may coexist, but their relative empirical contribution cannot be assumed from an attitude question alone (Ajzen, 1991; Bettman et al., 1998; Kahneman & Tversky, 1979).

Consider a hypothetical household service with low repeat purchasing after a fee increase. An affordability explanation predicts stronger attrition among customers facing tighter liquidity and cheaper alternatives; a perceived-control explanation predicts that failed payment attempts and lack of access matter even after willingness to buy is considered; a reference-loss account predicts responses to how the change violates prior price expectations; and a service-quality account predicts a link with documented delivery failures. A credible research plan would distinguish these hypotheses using observations obtained before the outcome, clear outcome windows, evidence about alternative services and, where ethically feasible, a controlled intervention. It should resist post hoc labeling of whichever explanation seems intuitively compelling. The objective is neither psychological reductionism nor exhaustive prediction, but a decision that survives plausible rival interpretations.

14.3 SOCIAL AND CULTURAL INFLUENCES

14.3.1 Families, reference groups and social learning

Consumer decisions are embedded in relationships through which information, resources and approval circulate. Festinger's (1954) social comparison theory explains why individuals may evaluate opinions or abilities relative to others when objective standards are uncertain. Reference groups can provide evidence, establish norms or confer identity, but their influence depends on credibility, product visibility and the perceived costs of disagreement. For a new mobile financial service, a trusted relative's experience may carry more weight than a national advertisement; for a professional procurement decision, peer institutions and technical auditors may be more relevant. These mechanisms should be measured rather than asserted merely because a consumer lives in a particular country.

Rogers (2003) analyzes diffusion in terms of perceived innovation attributes, communication channels, time and social systems. Relative advantage, compatibility, complexity, trialability and observability offer practical hypotheses for adoption research. But diffusion models can become misleading when they imply that everyone who has not adopted is simply a late adopter. Structural exclusion, affordability, unfavorable contracts and rational distrust may explain nonadoption. Network effects may improve usefulness for connected groups while deepening exclusion for those outside them. A responsible market study examines both peer influence and unequal access.

14.3.2 Culture, language and contested generalizations

Culture operates through learned meanings, norms and practices, not through a fixed national personality. National aggregates can guide questions about service expectations, authority, privacy or trust, but they cannot be applied mechanically to individuals. Urban and rural customers, occupational communities, generations, migration histories and socioeconomic positions intersect; a language choice may indicate accessibility rather than identity. Cross-cultural measurement additionally requires evidence that translated questions retain comparable meaning and response behavior. A numerical difference between countries is not necessarily a difference in the latent attitude of interest.

The transfer of international consumer models to Rwanda requires particular caution. High-income online-panel studies frequently exclude people with intermittent connectivity, limited literacy or shared devices. Conversely, research grounded in local settings should not be romanticized as immune to selection or social desirability bias. The appropriate approach is theoretically informed local inquiry: define a behavior, test whether instruments work in Kinyarwanda and other relevant languages, compare contexts within the population, and report which groups the sample cannot represent.

14.3.3 Social networks, trust and influence identification

Observed similarity among connected consumers can result from social influence, selection into similar networks or exposure to the same conditions. A neighborhood may adopt a digital service after community members recommend it; it may also adopt because a new network tower or payment agent becomes available. Correlation among friends therefore cannot by itself establish interpersonal contagion. Identifying influence may require randomized invitations, timing-based natural variation or carefully justified quasi-experimental design, with appropriate protections for third parties. Managers should distinguish advocacy actually observed from inferred influence scores and avoid profiling people's social relations without a legitimate purpose.

Social and cultural explanation is most useful when it changes the quality of a decision. It can reveal why messages need accessible language, why service recovery may require family or community channels, and why familiar channels can be trusted even when technologically less efficient. But its value depends on empirical humility. Consumers are not representatives of immutable cultural types; they are agents acting within evolving social arrangements, and market practices can themselves change those arrangements.

14.3.4 Consumer culture and the external-validity problem

Consumer culture theory investigates how markets, social meanings and institutional histories shape projects of identity, consumption practices and marketplace communities. Arnould and Thompson (2005) show that interpretive research has explanatory interests that cannot be reduced to a demographic control variable or a laboratory framing effect. Its strength lies in examining how social practices organize experience and aspiration; its limits include the difficulty of making numerical prevalence claims from selectively recruited accounts and the danger of treating richly described groups as internally uniform. Applied to a Rwandan service, the relevant question is not what “Rwandan consumers” essentially believe, but how distinct households understand reliability, privacy, community recommendation and acceptable payment under actual conditions.

An additional limitation concerns the geographical location of much canonical experimental psychology. Henrich et al. (2010) documented the problem of broad behavioral generalization from samples disproportionately drawn from Western, educated, industrialized, rich and democratic societies. That critique does not mean that every established psychological mechanism fails in Africa, nor that locally recruited samples automatically offer national representativeness. It requires establishing measurement equivalence, choice-set similarity and relevant institutional conditions before transferring effect sizes or behavioral classifications. Likewise, Aral et al. (2009) empirically distinguished social influence from

homophily in a particular large network, illustrating why peer similarity alone cannot identify contagion. International scholarship is most useful when it clarifies testable mechanisms and its own boundary conditions.

14.4 THE CONSUMER DECISION JOURNEY

14.4.1 A recursive rather than mechanically linear process

The conventional stages of problem recognition, information search, evaluation of alternatives, purchase, consumption and postpurchase evaluation remain valuable as questions for inquiry. They should not be mistaken for a compulsory chronology. Routine buyers may renew without active search; digital recommendations may trigger recognition of a previously unarticulated problem; an institutional buyer may reopen technical evaluation after procurement approval; and service delivery can alter preferences for a subsequent purchase. Lemon and Verhoef (2016) distinguish pre-purchase, purchase and post-purchase experiences, emphasizing multiple touchpoints across channels and actors. Their framework shifts analysis from a single marketing event to the temporally extended experience of the offering.

At problem recognition, research asks whose unmet need matters and what event made it salient. At search, it examines accessible information, trusted sources, nonuse of channels and search costs. At evaluation, it asks which attributes are considered, which alternatives are feasible and how risk is interpreted. At purchase, payment failure, stockouts and documentation can defeat a favorable intention. During consumption, product reliability and service behavior shape realized value; in evaluation, complaints, switching, recommendations, return or disposal provide different forms of feedback. Each stage may contain several people, organizations and digital systems. A journey map that merely lists advertising platforms while omitting payment, delivery, accessibility and remedy cannot explain overall customer experience.

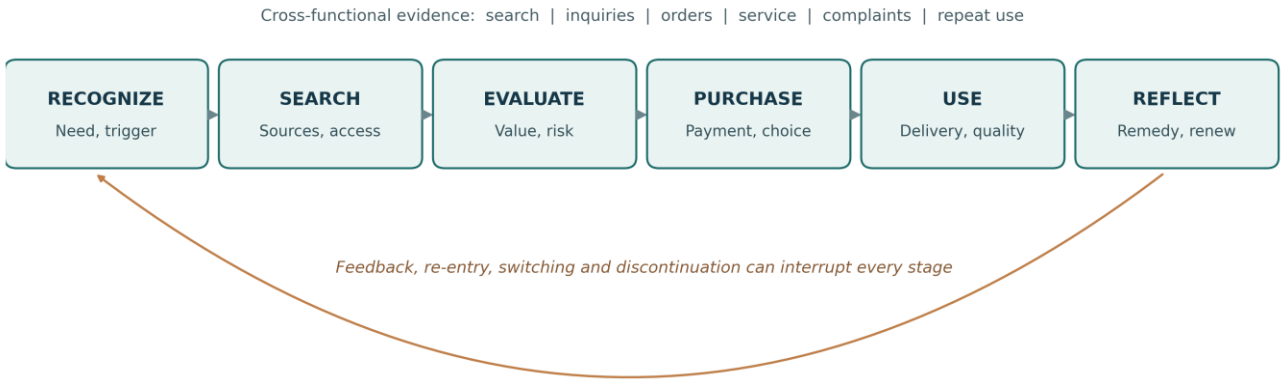


Figure 14.1. Evidence-linked, recursive customer journey. *Original synthesis informed by Bettman et al. (1998) and Lemon and Verhoef (2016). Each transition is conditional; feedback, interruption, search and re-entry can occur at multiple points. The diagram identifies illustrative evidence types, not empirically verified paths or universal stage conversion rates.*

14.4.2 Touchpoints, moments of truth and journey evidence

Touchpoints are occasions when a consumer encounters an organization, partner, offering or representation of it. Some are owned by the enterprise, such as invoices and support calls; others are controlled by retailers, platforms or independent users. A practical journey map should record the customer's objective, actors involved, observed behavior, possible friction, outcome measure, data source and responsible enterprise function. It must also record the limits of each source. Search analytics may capture pages viewed but not information learned from a friend; support records capture recorded complainants but omit dissatisfied customers who never report; transaction records may not link correctly across shared household accounts.

The phrase moment of truth is useful only when tied to a consequential expectation and evidence of its fulfillment. For an essential household service, failed delivery and an inaccessible complaint procedure may matter more to trust than a visually engaging checkout screen. Managers should avoid assigning higher priority to what is easiest to instrument. The denominator in a funnel also changes by stage: visitors, unique persons, eligible households, qualified inquiries, completed orders and active users are different populations. Conversion percentages have meaning only when the eligibility definition, observation window and identity resolution method are disclosed.

14.4.3 Postpurchase consequences, service recovery and circularity

Postpurchase inquiry includes actual use, continued fitness for purpose, unexpected costs, complaints, repair, return, switching, recommendation and end-of-life impacts. In recurring services, effective complaint resolution may restore confidence, but simply closing a ticket does not prove remedy. Consumers can retain a subscription despite unresolved harm when switching is difficult; others can leave for reasons unrelated to experience. Transactional retention must therefore be interpreted together with feasible alternatives, perceived value and grievance evidence (Oliver, 1999). Where goods create waste, product return and responsible disposal are also part of a credible journey, although detailed circular business models belong to Chapter 31.

Journey management necessarily crosses functions. Marketing may promise delivery, operations must perform it, finance designs accessible payment and credit controls, technology governs identity and data access, and customer service makes redress possible. Strategy sets the intended market; governance determines which risks are acceptable. The purpose of the journey map is not to assign all responsibility to marketing, but to make the interactions visible so that customers encounter one accountable enterprise rather than disconnected departments.

14.4.4 Journey measurement as a longitudinal inference problem

A customer journey is a conceptual representation, not an automatically observed sequence. A high-quality longitudinal design specifies entry rules, event time, observation windows, state transitions, identity resolution and the possibility that some consumers are never observed. Journey analytics can be biased by left truncation when prior experiences precede the available record, right censoring when the study ends before later purchases, and informative dropout when disengaged customers become difficult to contact. Customers using shared phones or alternating between physical and electronic channels may be counted as multiple entrants or falsely classified as lost. Each defect changes the meaning of a conversion or retention rate even if every recorded database operation is technically correct.

A decision-useful journey map therefore combines a conceptual path with an evidence audit. For each stage, the analyst defines the event that constitutes passage, the population eligible to enter, the time available to reach the next stage, the data-producing system, the sources of missingness and the process owner. Analysts should then compare documented customer experience with operational failures and complaint records, rather than inferring sentiment from funnel transitions. Such a map helps locate possible failures, but causal assignment to a particular touchpoint requires additional design. A customer who abandons payment may have encountered a confusing interface, insufficient funds, an unavailable network or a preferred alternative; the observed event alone does not determine the cause.

14.5 DIGITAL CONSUMER BEHAVIOUR

14.5.1 Search, visibility and ranking-mediated choice

In digital markets, a consumer's available options are shaped not only by prices and underlying quality but also by ranking, recommendations, sponsored placement and interface defaults. A high-ranking result may receive attention because it is relevant, because an algorithm prioritizes historical engagement, or because a

seller has paid for visibility. These mechanisms complicate the interpretation of clicks. Click-through rates describe behavior conditional on what was displayed and to whom; they do not reveal the welfare of unexposed buyers or the intrinsic quality of alternatives. Ranking feedback loops can amplify providers that already receive attention, creating an apparent popularity advantage without equivalent differences in service performance.

Search results and price comparison sites may reduce information costs, but they can also increase cognitive load and channel dependency. Users facing unstable internet access, data charges or inaccessible interfaces may search differently from panel respondents with unlimited connectivity. A Rwandan service company should therefore measure not only digital reach, but successful completion by device, language, payment means and accessibility constraint. A digital funnel cannot be interpreted apart from its social and infrastructural setting.

14.5.2 Reviews, social commerce and influencer credibility

Online evaluations create evidence that firms do not fully control. In their study of online book reviews, Chevalier and Mayzlin (2006) found relationships between changes in review valence and relative sales within their investigated platforms; the authors also detected asymmetries across favorable and unfavorable reviews. Their study supports the importance of electronic word of mouth in a particular product and historical market; it does not establish that a modern Rwandan household service will exhibit an identical effect. Reviews may be authentic, strategically solicited, fake, selective or platform-filtered. Even genuine reviews disproportionately represent people willing and able to post them.

Social commerce combines social discovery, interpersonal endorsement, messaging and transactions. Influencers may provide useful demonstrations, but paid affiliations must be distinguished from independent evaluation. Influencer reach is not equivalent to trust, nor are impression counts equivalent to independently verified demand. In contexts where customers rely on messaging applications, a firm must distinguish informal discussion from an authorized sales or support channel. Screenshots circulated outside their source can amplify inaccurate claims, while unrecorded chat orders may weaken payment reconciliation and consumer remedy. The governance issue is therefore both representational and operational.

14.5.3 Attention design, personalization and dark patterns

Digital personalization can reduce irrelevant information and improve access, but it can also exploit predictable vulnerabilities. Countdown timers that reset without a genuine deadline, preselected paid options, deceptive cancellation flows and concealed recurring charges can alter measured conversion while reducing informed choice. Behavioral science cannot supply moral authorization for such practices. Ethical evaluation should ask whether information is truthful, salient and comprehensible, whether users can reject or exit without disproportionate friction, and whether the intervention exposes a vulnerable population to foreseeable harm.

Personalized systems require careful causal evaluation. A platform may report that high-engagement customers who receive tailored offers spend more than other users; those customers may already have had stronger demand. Comparing treated and untreated populations without addressing baseline differences risks attributing selection to algorithmic performance. Randomized assignment can improve causal identification when feasible and lawful; appropriately designed observational studies require explicit assumptions about confounding, overlap and interference. A technically accurate targeting model need not be an ethically legitimate targeting policy.

14.5.4 Empirical tests of manipulation, autonomy and disclosure

The ethical status of interface design can be investigated, rather than merely asserted. Luguri and Strahilevitz (2021) used experimental approaches to study dark-pattern effects and their implications for

consumer decisions. Their findings reinforce the need to examine not only whether a design changes acceptance but whether users understand the choice, recognize costs and can exercise their actual preferences. Experimental results from a specific online setting should not be transferred as universal estimates for African markets, especially where devices, bandwidth, language and payment arrangements differ. Nevertheless, the study supports a general methodological distinction between a friction-reducing design that helps people complete an intended action and a deliberately confusing design that produces an action contrary to their interests.

For an enterprise evaluating personalization, an ethical test should predefine both effectiveness and agency-related outcomes. Effectiveness may include correct completion, fulfilled orders and complaint-free delivery; agency-related outcomes may include comprehension of recurring charges, ability to opt out, time to cancel, mistaken consent and adverse effects across access groups. Reporting only clicks, purchase rates or email openings suppresses material consequences. Marketing research should also examine whether targeted consumers could reach the same offer through a non-personalized route, and whether the optimization policy could systematically divert resources away from less observable or less profitable customers. This approach makes the limits on persuasive design part of the evaluation protocol instead of adding ethics after rollout.

14.6 MARKET RESEARCH PROBLEM FORMULATION

14.6.1 From management discomfort to an answerable question

A manager's statement that customers are 'not loyal' is a diagnosis, not a research question. It leaves unspecified whether the issue is a fall in repeat purchasing, changing contract terms, measurement failure, service quality or competitive entry. A defensible research question identifies the decision, target population, construct, reference period, feasible alternatives and evidence that would alter managerial action. For example: among households eligible for water delivery in three defined Kigali service zones during a stated quarter, what proportion recognized the provider, successfully completed a first order, and reordered within thirty days? That descriptive question is different from asking whether a reduced delivery fee would increase repeat orders, which is causal and requires an appropriate comparison.

Research begins by articulating a decision rule: what would management do differently if the answer were high, low or uncertain? If no feasible decision depends on the result, further data collection may be wasteful. A research brief should then distinguish exploratory questions about meaning and mechanisms; descriptive questions about prevalence, frequency or distribution; predictive questions about future events; and causal questions about effects of interventions. These warrant different designs. It is a methodological error to use an exploratory focus group to claim market-share prevalence, a cross-sectional attitude correlation to claim causal effectiveness, or an experiment on one channel to assert population-wide preference.

14.6.2 Constructs, hypotheses and counterfactual logic

Terms such as trust, perceived convenience, loyalty and satisfaction are constructs that require specification. If trust is understood as willingness to rely on a provider under vulnerability, a single item asking whether the logo is familiar does not measure it adequately. A hypothesis should connect defined variables through a reasoned mechanism and identify a plausible rival. For instance, 'shorter verified delivery intervals increase thirty-day repeat ordering among first-time users' is testable only if delivery exposure, outcome timing, confounders and customer eligibility are specified. Competing explanations include price, geographic distance, seasonality and household purchasing cycles.

For causal questions, the counterfactual is the outcome the same unit would have experienced under an alternative exposure, which cannot be directly observed at the same time. Randomization attempts to make comparison groups exchangeable on average; a before–after difference alone does not. Researchers must

also ask whether customers influence one another, whether an intervention is implemented as planned, and whether its effects persist. The proper estimand might be the intention-to-treat effect of *offering* a delivery reminder, not the effect of *reading* it, because reading is self-selected. The distinction is essential for practical rollout recommendations (Kohavi et al., 2020).

14.6.3 Secondary data appraisal and an auditable research brief

Secondary sources include official household surveys, census tables, administrative records, industry reports, published studies and enterprise logs collected originally for other purposes. Their advantages include scale, historical comparisons and lower collection cost; their weaknesses include mismatched populations, old classifications, missing constructs, inaccessible microdata and changes in collection methods. Rwanda FinScope 2024 can contextualize financial-service use; it cannot reveal the number of Kigali households willing to subscribe to a specific water-delivery provider. A bank's customer file may reveal payment failures among account holders but say nothing about cash-paying noncustomers.

The research brief should record the decision and intended claim, population and exclusions, variable definitions, original data producer and reference period, extraction location, quality risks, comparative design, legal basis for processing, planned analysis, sensitivity tests, disclosure restrictions, responsible reviewer and revision trigger. This audit trail is not bureaucracy for its own sake: it makes disagreements about meaning and evidence inspectable. The following protocol connects research to a decision without implying that every step requires primary fieldwork.

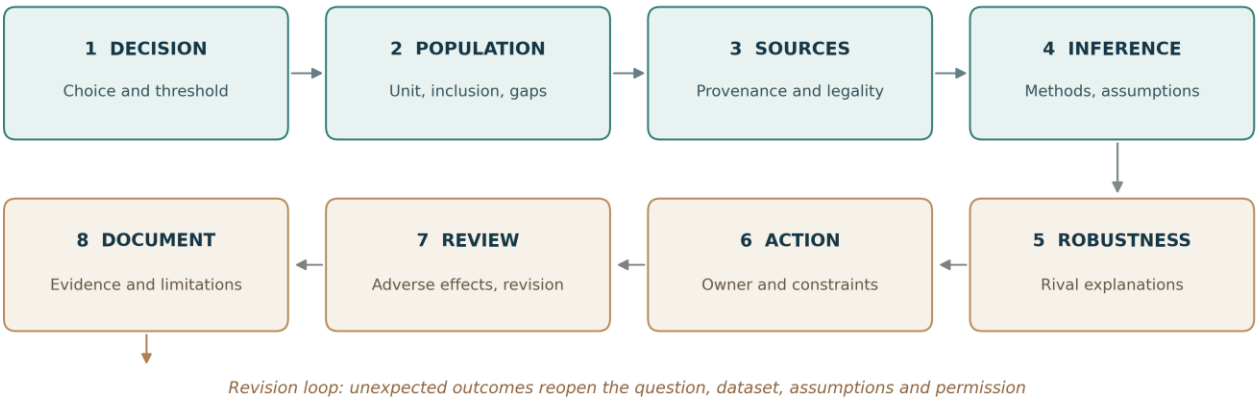


Figure 14.2. Evidence-to-decision protocol for customer intelligence. *Original analytical synthesis informed by Cochran (1977), Tourangeau et al. (2000), Braun and Clarke (2006), Podsakoff et al. (2003) and Kohavi et al. (2020). A decision is revised whenever new evidence undermines measurement, inference or lawful use.*

14.6.4 Construct-to-estimand alignment and a falsifiable research programme

The research brief becomes more useful when it explicitly maps the manager’s decision to an estimand. A descriptive estimand might be the proportion of eligible households that complete a valid first order during a defined quarter, whereas a causal estimand might be the difference in thirty-day repeat purchasing if all otherwise eligible households were offered an accessible payment reminder versus the usual process. The latter requires specification of the treatment, comparison condition, eligibility, follow-up and policy-relevant analysis population. A predictive estimand, by contrast, might be the probability of a verified future service lapse given information available before the lapse. Predictions can help allocate attention but cannot establish that outreach would prevent the event (Hernán & Robins, 2020).

A falsifiable plan states in advance what findings would challenge the preferred explanation. For example, if payment difficulty is proposed as a principal driver of attrition, the analysis should check whether failure-coded transactions precede lapses, whether the association survives plausible measurement changes, and

whether affected customers have other documented service problems. If the internal data lack attempted orders or payment failures, no amount of modeling observed completed purchases can establish their prevalence. A responsible research programme can end with an identified information gap, a recommendation against costly action, or an ethically limited pilot. Intellectual rigor concerns the quality of warranted inference, not pressure to supply a positive answer to management.

14.7 QUALITATIVE MARKETING RESEARCH

14.7.1 Meaning, mechanisms and appropriate qualitative designs

Qualitative inquiry is indispensable when the question concerns how people interpret an experience, form trust, describe barriers or negotiate decisions. An in-depth interview can explore why a customer regards a mobile payment confirmation as insufficient assurance; a focus group can reveal shared vocabulary and disputed norms; observation can reveal a checkout barrier respondents overlook; and documentary analysis can trace the wording of complaints and contractual communications. The purpose is not necessarily to estimate prevalence, but to develop rich accounts of processes, distinctions and competing interpretations. The method must follow the question, not the assumption that qualitative work is an inexpensive preliminary stage before 'real' quantitative research.

Interviews require a defensible sampling strategy. Purposeful selection can maximize variation across service users, nonusers, payment practices or regions, while clearly describing who was and was not included. Convenience samples from loyal customers can systematically conceal dissatisfaction and exclusion. In focus groups, socially sensitive complaints may be silenced by hierarchy or fear, while a dominant participant can obscure disagreements. Observation captures situated action but requires caution about consent and observer effects. A responsible protocol defines a flexible topic guide, language and translation procedures, recording and storage arrangements, referral or withdrawal procedures, and a strategy for contradictory evidence.

14.7.2 Analysis, reflexivity and credibility

Thematic analysis involves attentive familiarization with material, coding, developing patterns and evaluating how those patterns answer the question. Braun and Clarke (2006) emphasize that themes are analytical interpretations rather than patterns automatically generated by software. A researcher should document code meanings, changes in interpretation, the relation between excerpts and claims, and the treatment of disconfirming accounts. If multiple coders are used, the team must decide whether it seeks agreement on a predefined codebook or recognizes interpretive diversity; calculating intercoder agreement is not an automatic requirement for every qualitative tradition.

Credibility depends on fit among research question, recruitment, data richness, analytic approach and disclosed positionality. An investigator employed by a service provider may hear more favorable accounts than an independent researcher, especially where service continuity appears contingent on cooperation. Translating from Kinyarwanda into English can flatten idioms of trust or embarrassment; bilingual review of quotations and clear documentation of translation decisions are therefore important. Researcher reflexivity is not a claim that any reading is equally defensible. It is an account of how assumptions and position might shape what is noticed and how competing interpretations were evaluated.

14.7.3 What qualitative findings cannot establish

A group of twelve interviewees can reveal an unexpected obstacle with profound design relevance; their comments cannot, without additional assumptions, establish the proportion of all customers who experience that obstacle. Repeated mention should not be converted into a numerical percentage of the market. Nor does apparent thematic saturation demonstrate that excluded groups or rare harms were understood. Data richness and sampling adequacy are substantive judgments, not consequences of achieving an arbitrary

number of participants. Qualitative findings can specify potential causal mechanisms, improve survey wording, expose blind spots and generate testable propositions, but they do not by themselves estimate the treatment effect of removing a barrier.

For this chapter's Rwanda service case, a secondary-data-only phase can analyze published findings, consumer-protection guidance and publicly documented service complaints where lawful and available. It cannot claim to have interviewed customers. A future primary-data phase would require a real protocol, appropriate authorization and consent procedures, including explicit safeguards for vulnerable participants. This distinction protects scholarly integrity while preserving the legitimate methodological contribution of interpretive research.

14.7.4 Analytical transparency and critical interpretation

Qualitative rigor depends on a coherent relationship between the research question, epistemological orientation and treatment of evidence. A descriptive content analysis that seeks consistent categorization of complaint types places different demands on coding reliability from a reflexive thematic study that interprets how customers construct trust and obligation. Forcing one tradition's reliability coefficient upon another may create the appearance of objectivity without strengthening validity. Conversely, invoking interpretation cannot exempt an analyst from preserving evidence excerpts, disclosing contradictory cases and showing how conclusions developed. The strongest report explains why alternative readings were rejected or retained, whether translation changed relevant meanings, and what contextual features determine transferability (Braun & Clarke, 2006).

Secondary qualitative material requires equal care. Public reviews, regulatory filings and social-media posts can provide documentary evidence, but their authors and publication conditions may be highly selected. An inflammatory online complaint may indicate serious harm worth investigating without quantifying national prevalence. A company response may document an official position without independently proving that a dispute was remedied. Researchers should also consider the ethical status of material that is technically public yet contextually sensitive. Quoting an identifiable consumer's experience without necessity may expose that person to harm; paraphrase, careful redaction or aggregate description can sometimes preserve analytical meaning with lower risk.

14.8 QUANTITATIVE MARKETING RESEARCH

14.8.1 Populations, sampling frames and survey errors

Quantitative research enables estimates of defined distributions and contrasts, provided that the sampling and measurement support them. A probability sample permits design-based inference when units have known, nonzero inclusion probabilities and the analysis incorporates the sampling design. A sample of followers responding to a social-media poll does not become nationally representative because it contains thousands of responses. Coverage error arises when the frame misses relevant people; nonresponse error arises if respondents differ systematically from nonrespondents; measurement error arises when questions fail to elicit the intended construct. Weighting can adjust for observed discrepancies, but it cannot necessarily repair missing groups or unobserved nonresponse mechanisms (Cochran, 1977; Tourangeau et al., 2000).

For an illustrative large-population simple random sample estimating a proportion, the familiar normal-approximation planning expression is $n_0 = z^2p(1 - p)/e^2$, where z is the normal critical value, p the anticipated proportion and e the desired absolute margin of error. Under $z = 1.96$, $p = 0.50$ and $e = 0.05$, $n_0 = 384.16$, conventionally rounded up to 385 completed responses. For a simple random sample without replacement from N = 5,000 eligible units, the finite-population adjustment gives $n = Nn_0/(N + n_0 - 1) \approx 356.8$, rounded to 357. If anticipated response is 60%, approximately 595 invitations would be needed to

achieve 357 completions under an *unrealistically uniform response assumption*. These are teaching calculations, not a recommended sample for a real Rwandan study: clustering, stratification, unequal weights, anticipated subgroup precision and nonresponse bias can materially change design requirements.

14.8.2 Question design, scales and measurement invariance

A survey item should measure one clearly stated concept within a specified time period and with response options that cover plausible answers. 'How satisfied are you with price, reliability and delivery?' confounds three attributes; 'How many times did you use the service last month?' requires an unambiguous month and a definition of use. Question order, interviewer identity, recall demands, response categories and translation can influence answers (Tourangeau et al., 2000). A Likert-type response to an attitudinal item is ordinal as observed; averaging several such items can be a defensible approximate score under an articulated measurement model, but arithmetic precision does not prove construct validity.

Reliability concerns consistency under defined conditions; validity concerns whether interpretation and use of scores are justified. Internal consistency alone cannot establish dimensionality, content coverage or cross-cultural equivalence. Multi-item scale development ordinarily requires conceptual specification, expert review, cognitive pretesting, appropriate dimensionality assessment and evidence of convergent and discriminant validity (Netemeyer et al., 2003). When comparing groups, researchers should examine whether item functioning or measurement structure differs. A difference in response scale use may be produced by translation or interviewer context rather than a difference in genuine satisfaction.

14.8.3 Experiments, identification and decision relevance

Randomized controlled experiments are valuable when a feasible intervention can be assigned and tracked without violating rights. For example, eligible new customers could be randomly offered two accurately described payment-confirmation formats; the primary outcome might be successful first-order completion within a specified window. The comparison must be defined before analysis, include those assigned but not exposed where intention-to-treat is the estimand, and monitor safety outcomes such as failed payments or misleading confirmations. Treatment contamination, repeated testing, data leakage, unequal exposure and interference can invalidate results. Statistical significance is not equivalent to commercial or moral importance (Kohavi et al., 2020).

Observed differences between existing users of two payment instruments are not experimental estimates. Customers self-select into instruments because of income, access, preferences, neighborhood and provider availability. Regression adjustment or matching may help under measured-confounding assumptions, but an unrecorded factor can remain decisive. Quasi-experiments, interrupted time series or difference-in-differences designs also require documented assumptions and diagnostics. Responsible reporting includes effect size, uncertainty, sample exclusions, multiple-comparison considerations, implementation fidelity, temporal durability, segmentation concerns and the possibility of adverse impacts on underrepresented groups.

14.8.4 Integrated methods and the distinction between evidence and certainty

Qualitative and quantitative approaches can be combined sequentially or concurrently when their distinct contributions are explicit. Interviews may identify unrecognized barriers, then a probability survey can estimate prevalence, and an ethically approved experiment can test one remedy. Alternatively, a transaction analysis may reveal anomalous regional attrition, followed by interpretive inquiry about why it occurred. Triangulation is valuable when independent sources address compatible constructs and conflicting results are investigated rather than averaged away. A high survey satisfaction score alongside rising complaints may indicate selective response, an altered denominator or a true coexistence of good average experiences and severe failures among a minority.

The decisive output of research is not a claim of comprehensive certainty. It is a bounded, traceable recommendation specifying what is known, what remains unidentified, which decision is feasible, whose interests are affected and how the enterprise will learn after implementation. This standard connects specialist research to accountable enterprise management without pretending that a dashboard or p-value can substitute for judgment.

14.8.5 Statistical precision, nonresponse and causal credibility

Survey sample size should not be used as a synonym for representativeness. The simple random-sampling formula above concerns nominal sampling variance under its assumptions, not error from frame exclusion, strategic misreporting or selective nonresponse. Groves and Peytcheva (2008) synthesized methodological evidence showing that nonresponse bias depends on relationships between participation and the survey variables, not merely on a single response-rate threshold. A large opt-in panel can yield narrow conventional confidence intervals around a biased estimate. A smaller probability sample with sound coverage, appropriate weights and documented nonresponse assessment may warrant a more defensible population inference. Design effects, clustering and domain-specific precision must also be reported when relevant.

For experimental research, a statistically significant result is not sufficient evidence of practical value. An estimated treatment effect requires attention to pre-specified primary outcomes, confidence intervals, attrition, multiple testing, possible spillovers and costs of implementation. A result can be precise and commercially trivial, or economically large but imprecisely estimated. The experiment also answers an effect question only for the intervention and population actually studied; an offered reminder is different from an opened reminder, and the intention-to-treat effect generally differs from an effect among those who complied. When outcomes include access to essential services, decision criteria should include pre-specified safety and exclusion indicators alongside economic returns, rather than treating harms as incidental (Hernán & Robins, 2020; Kohavi et al., 2020).

14.9 CUSTOMER INTELLIGENCE AND CUSTOMER RELATIONSHIP MANAGEMENT

14.9.1 From first-party records to governed intelligence

Customer relationship management (CRM) encompasses the strategic, organizational and technological capabilities used to manage customer interactions and their economic and service consequences over time. It is not a synonym for a contact-list application. Kumar and Reinartz (2018) distinguish information infrastructure from the wider process of identifying, acquiring, developing and sustaining economically and relationally appropriate relationships. A firm may install expensive software yet achieve little improvement if customer identifiers are unreliable, information cannot be interpreted across departments, or incentives reward indiscriminate messaging. Conversely, a modest service provider can maintain useful intelligence through properly governed transaction histories, consent preferences, complaint registers and a disciplined review routine.

First-party data are obtained through the enterprise's direct relationship with users, such as orders, payments, support contacts and voluntarily supplied preferences. They are not automatically accurate, comprehensive or free from privacy duties merely because the enterprise collected them itself. Transaction logs contain behavioral traces conditional on the channels offered; self-reports depend on comprehension and recall; and complaints depend on the ease and safety of reporting. Third-party demographic datasets or platform-derived audiences may have different consent, quality and contractual limitations. An evidence register should document collection purpose, original source, time stamp, unit, population, transformations, accuracy checks, retention rule and permitted use.

14.9.2 Identity resolution, data quality and segmentation

A CRM system must distinguish customers, accounts, orders, subscriptions, devices, addresses and households. Merging these incorrectly creates phantom customers, erroneous attrition and accidental disclosure. A stable identifier can be helpful, but linking mobile numbers, location, transaction details and inferred household relationships increases privacy risk. Identity resolution should therefore be proportionate: management needs sufficient precision to issue correct invoices and resolve problems, not a complete profile of every person's life. Data-quality controls include uniqueness, completeness, valid time sequence, standardized definitions, error reconciliation, permissions and an audit trail for correction.

Segmentation analytics may use observable behavior, geography, service requirements and documented preferences, but segment labels should not be treated as inherent identities. Recency–frequency–monetary measures can describe transactional patterns, while cohort analysis groups customers by a defined starting event, such as first completed purchase. Neither by itself explains why people behave as observed. Frequent purchasers may be a profitable segment, a financially vulnerable group overusing a costly service, or households that share an account. Predictive segments require out-of-sample calibration, temporal validation, bias assessment and consideration of whether their use is lawful and fair. Chapter 13 develops market-selection strategy; here the question is whether the underlying evidence and classification are trustworthy.

14.9.3 CRM governance as an interfunctional arrangement

Useful CRM governance assigns specific responsibilities. Marketing defines analytically relevant questions and permitted communication purposes; sales records commitments accurately; operations records whether services were actually delivered; finance reconciles payment and contribution; customer support preserves the substance and outcome of complaints; information-security personnel govern access, retention and incident response; and designated leadership authorizes high-risk uses. The governance board should be able to answer why each field is collected, who can access it, what inaccurate values would cause, and how customers can correct records. Centralization without such arrangements can concentrate risk as effectively as it concentrates information.

A practical customer-intelligence release should contain the business question, population and period, data lineage, definitions, descriptive findings, alternative explanations, uncertainty or exclusions, affected groups, proposed action and a review date. Individual-level disclosure should be avoided where aggregation is sufficient. Management should distinguish operational decisions that require an identified customer, such as refunding an incorrect invoice, from analytical decisions that can use appropriately de-identified or aggregated records. Such purpose limitation protects customers and improves organizational focus.

14.9.4 Economic value, data stewardship and the identification problem

CRM frequently creates an apparent conflict between information value and data minimization. More detailed records can improve service reconciliation and error diagnosis, but they can also increase exposure to breach, re-identification, unauthorized secondary use and unequal treatment. Acquisti et al. (2016) show why privacy has no single universally adequate market-price representation: information asymmetry, externalities, context and imperfect decision-making complicate both individual choice and social welfare. A firm should therefore distinguish information essential to fulfilling an explicit contract from information merely convenient for future prediction. The gain from an additional variable should be weighed against its measurement error, operational cost, legal basis and the risks imposed on the person it describes.

The financial contribution of CRM should not be inferred from the fact that high-value customers receive more contacts. Selection is often endogenous: sales teams are more likely to call customers already expected to purchase, and established customers usually have richer records. An observational association between contact frequency and revenue may therefore reflect prior demand rather than an outreach effect. Where

appropriate, randomized service improvements or carefully designed phased rollouts can estimate incremental value while protecting essential entitlements. The relevant business question is whether governed use of customer knowledge produces an additional, demonstrable benefit net of service costs and risks, not how many fields have been populated or how sophisticated the segmentation algorithm appears.

14.10 CUSTOMER SATISFACTION AND RETENTION METRICS

14.10.1 Satisfaction, experience, complaints and loyalty

Customer satisfaction is a post-experience evaluation relative to expectations and perceived performance, but its operationalization varies. A transaction-specific satisfaction question measures a different object from overall relationship satisfaction; respondents may also evaluate recent failures or social expectations rather than a stable average. Fornell (1992) advanced customer satisfaction measurement as an interrelated system rather than an isolated item. Oliver (1999) explains why satisfaction and loyalty are connected without being equivalent: loyalty can involve cognitive preference, affective attachment, intention and action, while constraints, habits and social bonds influence continued purchasing. A customer can be satisfied and nevertheless change providers; another can be dissatisfied yet remain because switching is prohibitively difficult.

Complaint counts require a denominator and reporting-channel analysis. Ten complaints per 1,000 orders differ from ten per 100 orders, but a lower rate may also reflect closure of the complaint channel. Time to acknowledgment, substantiated resolution, repeat incidents, safety escalation and unresolved cases deserve measurement alongside volume. A customer-effort measure may capture difficulty in resolving a problem, yet it still depends on whom the firm asks. No composite score should conceal severe, low-frequency harms behind a favorable mean.

14.10.2 A decision-useful metric dictionary

Table 14.1. Core customer intelligence indicators: operational definitions and principal inference limits. *Formulas are generic unless a service contract defines a different risk set; original synthesis informed by Fornell (1992), Oliver (1999), Fader et al. (2005), Gupta et al. (2004) and Kumar and Reinartz (2018).*

Indicator	Definition or calculation	Decision value and interpretive limit
First-order conversion	Eligible prospects completing a first valid order ÷ eligible prospects exposed	Denominator, deduplication and attribution must be specified; not evidence of causality.
CSAT	Respondents meeting a stated satisfaction threshold ÷ valid respondents	Response and threshold selection can distort generalization.
Complaint incidence	Valid complaints ÷ defined transactions or active customers	Reporting ease and severity change interpretation; count serious harms separately.
Period retention	At-risk starting customers still active at end ÷ at-risk starting customers	Define active, cohort, cancellations, reactivation and observation window.
Period churn	At-risk starting customers lost during period ÷ at-risk starting customers	Equals 1 − retention only when same mutually exclusive risk set is used.
Repeat-purchase rate	Eligible first-time buyers making a subsequent order within a fixed window ÷ eligible first-time buyers	Censoring and different purchase cycles undermine naïve comparisons.
Net Promoter Score	% of 9–10 ratings minus % of 0–6 ratings on 0–10 recommendation scale	Not automatically superior to other growth or loyalty indicators.

Indicator	Definition or calculation	Decision value and interpretive limit
Customer lifetime value	Expected discounted future contribution attributable to a customer less defined acquisition/service costs	Model depends on survival, horizon, margins, discounting and identification.
Resolution success	Substantiated resolved cases ÷ cases eligible for resolution	'Closed' is not the same as the customer's problem being remedied.

Reichheld (2003) popularized a single recommendation score as a predictor of business growth, but Keiningham et al. (2007), examining longitudinal data, challenged claims of its clear superiority over other indicators. Consequently a Net Promoter Score may be reported as a defined attitudinal indicator, not promoted to a universal sufficient statistic for customer loyalty or profitability. Managers should triangulate perception, behavior, financial contribution and the consequences of failures, then ask whether the proposed intervention can plausibly influence the measured outcome.

14.10.3 Worked cohort-retention analysis

Table 14.2. Illustrative first-purchase cohorts and observed retention. All counts are hypothetical unique customers. Time zero denotes first completed order; each later month records members continuously active in every intervening month, without lapses or reactivation. This deliberately restrictive convention makes later counts nested subsets of earlier counts. Blank cells are not yet observable, not zero outcomes.

Acquisition cohort	Month 0	Month 1	Month 2	Month 3	Month-1 retention
January 2026	120	96	78	60	80.0%
February 2026	100	80	66	Not observed	80.0%
March 2026	80	61	Not observed	Not observed	76.25%

Under the explicitly assumed uninterrupted-activity definition, the first-month retention proportions are 96/120 = 80.0%, 80/100 = 80.0% and 61/80 = 76.25%. Pooling numerators and denominators gives (96 + 80 + 61)/(120 + 100 + 80) = 237/300 = 79.0%, not an unweighted average of cohort rates. For January, second-month retention relative to initial acquisition is 78/120 = 65.0%, while the conditional transition from month 1 to month 2 is 78/96 = 81.25% because the 78 customers are stipulated to be a subset of the preceding 96. Without that nesting assumption, a monthly repeat-purchase table allowing reactivation would not identify the transition probability. Third-month initial-cohort retention is 60/120 = 50.0%. These are distinct statistics; confusing them would exaggerate or understate changes in behavior.

This teaching table assumes an uninterrupted retained-customer state, a consistent definition of qualifying activity and comparable months, none of which is established in real data. A less restrictive active-in-month indicator permits customers to lapse and return; its marginal monthly counts cannot be divided to recover a conditional continuation rate without customer-level transitions. Some customer categories purchase seasonally, and account-linked orders might not represent separate people. The March cohort has a shorter observation history, so a comparison of month-three results across all cohorts is impossible. If the business intends to analyze true active-subscription churn rather than repeat transactions, it must reconstruct a different risk set that distinguishes subscriptions continuing, canceling, lapsing and reactivating. Cohort retention can reveal a pattern; it cannot identify whether a payment intervention, service deterioration or competing offer caused it.

14.10.4 Discounted customer lifetime value and sensitivity

A simplified constant-contribution model illustrates what retention assumptions imply for investment. Let m be contribution per active monthly period after variable service costs, r the constant probability that an active customer remains active into the next period, d the monthly discount rate, and A the acquisition cost paid at time zero. Assume the first period's contribution is received immediately, future continuation follows a stationary geometric process, and there is no reactivation, expansion, contract breakage or correlated customer heterogeneity. The expected net customer lifetime value is then:

$$\mathbf{CLV = \Sigma_{t=0}\infty\ [m \times r^t/(1 + d)^t] - A = m(1 + d)/(1 + d - r) - A}, \text{ provided } r < 1 + d.$$

For wholly illustrative assumptions of m = RWF 6,000, r = 0.80, d = 0.01 and A = RWF 8,000, gross expected discounted contribution is RWF 6,000 × 1.01/(1.01 − 0.80) = RWF 28,857.14; net CLV is approximately RWF 20,857.14. If r decreases to 0.70 with all else fixed, net CLV falls to about RWF 11,548.39; if r increases to 0.90, it rises to about RWF 47,090.91. The model is highly sensitive to retention and assumes away the very heterogeneity that may dominate a small service enterprise. It is an accounting-conditional illustration, not evidence that investing in retention will generate those returns.

Fader et al. (2005) provide a probabilistic alternative for repeat purchase settings by modeling heterogeneity in transaction rates and dropout processes; Gupta et al. (2004) demonstrate a valuation perspective based on discounted customer earnings. These frameworks illuminate why simple CLV formulas require careful behavioral assumptions. A practical investment decision should compare incremental contribution under plausible intervention effects with incremental delivery, support, credit, privacy and technology costs. Increasing observed retention by making cancellation difficult would produce an ethically distorted improvement and possibly future regulatory liabilities. The relevant outcome is economically and ethically defensible customer value over time, not maximization of a single retention ratio.

14.10.5 Financial interpretation, incremental value and model validity

A CLV estimate can support acquisition and retention decisions only after its unit economics are coherent. Contribution must deduct incremental costs attributable to serving the relationship, rather than equating revenue with margin. Acquisition cost must use an explicit allocation rule, and contractual refunds, bad debt, service recovery, discounts and payment fees must be treated consistently. For recurring services, different customers may have distinct survival hazards and margin trajectories, so the stationary geometric expression should be treated as a benchmark rather than a universal forecasting law. If customers can reactivate after lapses, the transition model requires states and probabilities beyond one continuation parameter. Even the meaning of “active customer” must be reconciled with the cohort definition used earlier.

A deliberately simple payback illustration reinforces this point. If a hypothetical acquisition costs RWF 8,000 and yields RWF 6,000 contribution in each active month, acquisition cost is covered after two actual contributed months in a realized uninterrupted relationship. This statement is not a prediction that all accounts will pay back in two months: some may never return and some may generate costly complaints. Under the Section 14.10.4 probabilistic assumptions, the gross expected discounted contribution after the first two potential periods is only RWF 6,000 + (0.80/1.01 × RWF 6,000) = approximately RWF 10,752.48, of which RWF 8,000 recovers acquisition cost. An intervention costing an additional RWF 3,000 per acquired account would require a defensible estimate of incremental survival or contribution, not merely the observation that highly retained customers have higher CLV.

Model validation should report at least a time-based holdout comparison between predicted and realized activity, calibration across meaningful cohorts, sensitivity to marginal-cost allocation, and whether prediction errors are systematically greater among customer groups with incomplete records. Presenting a precise currency estimate without these qualifications is a form of false precision. A model can be useful even when its point forecast is uncertain, provided that the recommended decision is robust across plausible

parameter ranges and the expected gains are not purchased through deceptive cancellation obstacles or discriminatory service withdrawal.

14.11 RESEARCH ETHICS AND CONSUMER PROTECTION

14.11.1 Legal authorization, consent and legitimate data purposes

In Rwanda, Law No. 058/2021 of 13 October 2021 relating to the protection of personal data and privacy supplies the principal statutory framework for relevant processing. Its provisions distinguish several lawful grounds; consent is important but is not the only possible legal basis. Where consent is relied upon, it must meet applicable requirements concerning information, specificity and withdrawal. The law contains additional provisions for children's personal data, including parental-responsibility consent when a controller knows that information concerns a child under sixteen, subject to statutory qualifications. It also addresses controller–processor duties, data-subject rights and security (Republic of Rwanda, 2021; Data Protection and Privacy Office [DPO], n.d.). A researcher should verify the precise current legal instrument and applicable implementation rules rather than assume that an internal business policy substitutes for the law.

Rwanda's Law No. 011/2026 of 26 February 2026 relating to competition and consumer protection, published in the Special Official Gazette of 4 March 2026, provides an additional consumer-facing legal context (Republic of Rwanda, 2026). It should be consulted when designing claims, online terms, disclosure, marketing and redress. In a European Union setting, Regulation (EU) 2016/679 identifies multiple lawful bases for personal-data processing, including but not limited to consent; its application depends on the controller, data subjects and territorial rules. Importing EU legal assumptions into Rwanda without jurisdictional analysis is as mistaken as assuming that every international firm has identical obligations. This chapter provides scholarly orientation, not a substitute for transaction-specific legal advice.

14.11.2 Substantive ethics beyond compliance checklists

Even a technically lawful collection can raise concerns about power, dignity and manipulation. Collecting every available location event may not be necessary to improve order delivery; combining financial need with an inferred emotional vulnerability to target urgent offers may be exploitative. The proportionality test asks whether the legitimate question can be answered with less intrusive data, whether use is understandable to affected persons, whether people can challenge adverse conclusions, and whether benefits justify residual risks. Consumers who decline tracking should not be silently treated as uninterested or inferior customers.

Children, people under financial stress, consumers with limited literacy or access, and those facing urgent health or household needs warrant special care. Research recruitment must avoid presenting voluntary participation as a condition of essential service. Survey questions about debt, medical history, family relationships and location should be justified by a genuine research need rather than by their potential predictive power. Informing people in a language they understand is a matter of substantive agency, not merely a formal check box. Where algorithmic decisions affect price eligibility or service access, companies should provide meaningful oversight, correction and pathways of remedy appropriate to the impact.

14.11.3 Fairness, interpretability and retention of research data

Statistical fairness is not achieved merely by excluding sensitive attributes from a prediction model. Postal code, device type, transaction regularity and network connectivity can proxy for protected or disadvantaged characteristics. Group outcome differences may be legitimate, harmful or confounded; determining which requires examining the decision's purpose, alternatives and effects. Managers should review both false exclusions and erroneous inclusions, alongside calibration, the availability of appeals and the provenance of

labels used as 'ground truth.' A churn model trained on customers who can be contacted may classify disconnected customers as less loyal when they simply have less reliable connectivity.

Data minimization and retention limits also improve inferential discipline. Duplicated stale records amplify mistakes; unnecessary linkage makes errors difficult to trace; unrestricted access increases opportunities for misuse. Ethical intelligence therefore includes a destruction schedule, role-based access, separation between research and sales activation, documentation of consent or other legal basis, and incident escalation. An independent reviewer should be able to reconstruct why a dataset was used and who authorized consequential decisions.

14.11.4 Rights, welfare and responsible behavioral intervention

Consumer-protection questions can be approached through several competing normative frameworks. A welfare analysis asks whether the practice creates benefits net of costs and harms; a rights-based analysis asks whether certain forms of deception, coerced disclosure or unfair exclusion remain unacceptable even when aggregate benefit appears positive; a procedural account asks whether affected consumers receive intelligible reasons, fair opportunities to object and accessible remedy. These approaches need not produce the same judgment. For example, an aggressive default may increase completed payments while benefiting the provider and some consenting customers, yet remain problematic if it predictably misleads less attentive users. Identifying that disagreement is analytically preferable to declaring all profitable personalization either beneficial or exploitative (Acquisti et al., 2016; Luguri & Strahilevitz, 2021).

A proportional decision rule should therefore ask four linked questions. Is the commercial purpose legitimate and specified? Does credible evidence indicate that the intervention actually advances it? Is there a materially less intrusive or less manipulative means? Can the residual burdens be justified to those most exposed, including children, persons with disabilities and consumers facing financial pressure? These questions must be answered with the relevant jurisdiction’s requirements in view, but legal permission and ethical justification are separate claims. Where a business cannot verify that an interface provides comprehensible information or an effective opt-out, deferring deployment is a defensible decision even in the absence of established monetary harm.

14.12 EMERGING BEHAVIOURAL RESEARCH

14.12.1 Generative AI, synthetic participants and the problem of empirical substitution

Generative AI can help refine exploratory questions, summarize large textual corpora, compare candidate survey wording and assist with reproducible code. These uses are not equivalent to collecting valid observations from people. A language model instructed to 'answer as a low-income consumer in Kigali' produces text shaped by training data and prompting, not a sampled respondent with firsthand experience. Boelaert et al. (2025) found serious limitations when language models were used to emulate opinion-survey respondents, including biases and insufficient response variation. Their evidence concerns the models and designs examined and should not be made into a timeless claim about all future systems. It nonetheless provides a strong reason not to substitute synthetic responses for population-representative field evidence without rigorous independent validation.

Synthetic records can be useful for testing survey software, evaluating a reporting pipeline or exploring hypothetical scenarios when clearly marked and separated from evidence. They must not be counted as actual participants, appended to a real dataset without disclosure, or used to imply observed customer preferences. Research that uses AI-supported coding should retain the original permissible data, human review rules, prompt or model version where relevant, validation sample and a record of disagreements. A multilingual customer-support classifier may have materially different performance on Kinyarwanda

language varieties from its performance on English; acceptable deployment requires testing against locally relevant examples and harms.

14.12.2 Privacy-preserving analytics, federated systems and limits of de-identification

Privacy-preserving approaches include aggregation, strict access controls, secure computation, federated analysis and differential privacy. Dwork (2006) formalized differential privacy as a mathematical approach to limiting how much an output can reveal about an individual's inclusion in a dataset. Its guarantees depend on a stated privacy parameter, mechanism, data processing and composition across releases. It does not make an arbitrary table anonymous, eliminate the need for a lawful basis or guarantee that a poorly designed analysis is unbiased. Removing names alone is not sufficient when rare purchase combinations or location histories can re-identify people through auxiliary information.

A small Rwandan service provider should not adopt complicated privacy technology merely because it is fashionable. The first questions concern what must be recorded for service delivery, what can be aggregated, how long records should survive, whether access is limited, and whether information leaves the organization. Technical architecture belongs principally in Chapters 28–29; here the point is that the statistical usefulness and privacy implications of customer intelligence must be evaluated together. In some cases a small, high-quality, securely governed dataset is more valuable than a large customer graph built through opaque aggregation.

14.12.3 Prediction, causal explanation and human oversight

Machine-learning models can predict churn or likely service demand from patterns in historical observations. Prediction can guide capacity allocation but does not establish that a suggested intervention will alter outcomes. High predicted churn may be driven by prior service failure, region, purchasing cycle or a change in account coding. A policy that targets predicted 'high value' customers may systematically withhold support from new or poorly measured users. The appropriate governance sequence includes a clearly defined prediction target, temporal validation, subgroup review, documented decision rule, human appeal, controlled intervention testing where feasible and monitoring for drift or unintended consequences (Huang & Rust, 2021; National Institute of Standards and Technology [NIST], 2023).

The most important technological distinction is between an analytical recommendation and delegated authority. A model can rank cases for further investigation without being authorized to deny service, increase prices or expose private information. Human oversight must be meaningful: a supervisor who automatically approves model output is not a credible safeguard. Emerging tools should be assessed against error costs, institutional capability, governance, local language performance, accessibility and recourse. The enduring principle is not that more automation makes research more scientific, but that claims become more defensible when data, methods, assumptions and consequences remain open to challenge.

14.12.4 Validation against real-world populations and institutional capacity

AI-assisted consumer research creates a distinctive problem of construct validity. A system may score highly on a convenient benchmark yet fail when local consumers use code-switching, informal terms, dialect variations or low-connectivity devices. External validation requires performance evidence drawn from real, lawfully obtained target-population materials, not only model-generated test responses. Sampling must deliberately include rare but consequential failures and groups likely to be underserved. Measures should reflect the use case: transcription accuracy, meaning-preserving translation, false complaint closure, inappropriate inference of intent and harmful disparities may all matter more than an aggregate classification score. The implementation decision must distinguish acceptable assistance with research administration from authority over sensitive decisions.

Synthetic participants offer an instructive contrast. Boelaert et al. (2025) found systematic distortions when large language models simulated opinion-poll respondents, illustrating why generated text is not an

observed response from a defined sampling frame. Research teams can use such text as a hypothetical stimulus for instrument testing, but should disclose its provenance and test any proposed substitution against independent human responses on the same constructs. Privacy-enhancing computation similarly requires concrete threat models and verification; a formal privacy guarantee does not establish measurement quality or remove legal duties. In constrained enterprises, robust access control, a defensible retention schedule and competent human review may deliver more reliable protection than sophisticated but poorly administered technologies.

14.13 RWANDA-BASED APPLICATION AND INTERNATIONAL COMPARISON

14.13.1 What official secondary evidence can establish

Rwanda's FinScope Survey 2024, produced by Access to Finance Rwanda with public and private partners, provides a credible documented case of research that distinguishes financial-service access, use and inclusive-finance concerns. The national research sampled 14,000 households and reports approximately 13,994 completed individual interviews, with a stratified, multistage selection design and questionnaire translation into Kinyarwanda. It concerns eligible people aged sixteen years and above in its defined household frame, not every child or individual living in an institution. The official summary reports financial inclusion of 96% in 2024 compared with 93% in 2020; 92% were formally included. About 86% reported owning or having used mobile money, while the percentage holding a registered mobile-money wallet in their own name rose from approximately 60% in 2020 to 77% in 2024 (Access to Finance Rwanda [AFR], 2024; National Institute of Statistics of Rwanda [NISR], 2024). The distinction between 'owning or using' and holding an account in one's own name is central: these are different constructs and should not be merged into one customer-acquisition figure.

The results establish substantial financial-service engagement within the survey's measurement framework, but they do not establish that 86% of people buy products online, that the same percentage can afford a household delivery subscription, or that any particular firm has achieved high retention. Nor does the increase between survey rounds alone identify the causal effect of a specific public policy or technology. For a service operator, the evidence supports a more modest conclusion: mobile financial infrastructure is relevant to research and service design, and the contrast between access and usage deserves investigation. The public documentation of its questionnaire, sampling and data dictionary offers opportunities for secondary inquiry subject to access, confidentiality and weighting requirements. It does not authorize an investigator to claim analysis of microdata that have not been retrieved and analyzed.

Kenya's 2024 FinAccess Household Survey provides a meaningful but non-equivalent regional comparator. The Central Bank of Kenya, Kenya National Bureau of Statistics and Financial Sector Deepening Kenya report that formal financial access reached 84.8% in 2024, while 9.9% were excluded from financial services (Central Bank of Kenya et al., 2024). The Kenyan survey sampled people aged sixteen and above but its published analysis was based on those aged eighteen and above; Rwanda FinScope's reported population concerns people aged sixteen and above. The survey constructs, financial-sector categories, time frames and sampling weights also require assessment before substantive cross-country inference. It is therefore invalid to subtract 84.8 from Rwanda's 96 and interpret the 11.2-percentage-point difference as a measured national advantage in online buying, payment convenience or digital loyalty. Such a subtraction compares distinct definitions and cannot identify the reason for any observed national difference.

14.13.2 A secondary-data research plan for a Kigali service business

Return to the wholly hypothetical household water-delivery and refill enterprise introduced in Section 14.0. Management must decide whether to offer mobile-money payment as the default, maintain equivalent cash and agent alternatives, and invest in an inclusive service-recovery system. Its first decision is not whether the national mobile-money statistic is high. It must identify whether payment choice affects successful

ordering, whether payment failures contribute to attrition, and whether access barriers are concentrated among particular eligible households. A defensible initial phase can be completed with *secondary evidence and existing lawfully held administrative records*, without claiming to survey or interview anyone. The proposal below is a prospective research plan, not an account of analysis already performed.

Table 14.3. Rwanda service-provider research design and evidence-quality matrix. *Sources identified are public or organizational categories; no customer-level data access, analysis or approval is implied.*

Decision question	Candidate secondary evidence	Unit and intended inference	Main limitation and safeguard
How widespread is financial-service access?	AFR FinScope 2024 report, questionnaire and NISR survey metadata	Eligible national individuals, not paying service customers	Respect age, sampling frame, survey weights and use-versus-ownership definitions.
Which local areas could plausibly be served?	NISR 2022 census geography (NISR, 2025) and relevant local service records	Area population and infrastructure, not observed willingness to buy	Do not count residents as addressable subscribers; confirm spatial resolution.
Where do payment attempts fail?	Existing authorized, aggregated payment-reconciliation logs	Attempts by method, date, location and error class	Excludes cash-only nonusers and may contain sensitive transaction identifiers.
Why might first buyers not return?	Authorized cohort summaries, complaint codes and service-failure histories	Defined first-order accounts and qualifying follow-up events	Correlation does not identify cause; preserve account/household distinction.
What consumer safeguards apply?	Rwanda DPO guidance and primary 2021/2026 statutes	Legal duties for specified processing and market conduct	Verify applicability, current instruments, lawful basis and sector obligations.
What can a regional comparator establish?	Kenya FinAccess 2024 report and methodological documentation	Financial-access indicators within the Kenyan adult analysis frame	Harmonize definitions before comparing; no cross-country causal inference.

A first-stage documentary protocol would specify the source file, issuing institution, reference date, survey universe, variable interpretation and exact table or extract location. The analytical team would then build a concept-to-source crosswalk showing which questions are supported by public data and which require internal operational records. For internal analysis, the finance and service teams would reconcile valid first-order transactions, payment attempts, refunds, deliveries, complaints and cancellations. If permission and data adequacy permit, a stratified cohort analysis could compare payment instruments while explicitly acknowledging selection. A descriptive result should not be promoted into a causal recommendation without a credible identification design.

A second-stage inquiry would seek falsification rather than a comforting positive pattern. If mobile-money users appear to retain longer, are their transactions concentrated in areas with faster delivery, more reliable telephones or higher incomes? Does the association persist when the definition of active customers changes? Were refunds processed similarly across methods? How many eligible households attempted to register but could not complete the process? If nonusers are missing from company records, the research should say so. The methodological response is to identify evidence gaps and, only if necessary and separately authorized, design ethically appropriate primary inquiry rather than fabricate missing behavior from digital traces.

A third-stage decision memo would compare alternatives: maintain all current payment options with improved reconciliation; provide clear payment confirmation and a human escalation route; or test a redesigned payment process on a limited, adequately monitored basis. Every alternative would be assessed for incremental cost, accessibility, fraud exposure, customer experience, operational feasibility and lawful data processing. The recommended intervention would include a defined baseline, pre-specified outcomes,

stopping conditions for harm, an accountable decision owner and a review interval. What makes this plan rigorous is not the quantity of data it proposes to collect, but the alignment of its questions, available evidence, feasible decisions and limits of inference.

14.13.3 Transferability and institutional realism

International examples demonstrate mechanisms, not ready-made coefficients. An online review effect identified for books in the United States cannot be copied into a Rwandan essential-service forecast; a customer-lifetime model fitted to high-frequency subscription purchases should not be assumed to describe irregular household purchases. Infrastructure, spending capacity, literacy, institutional trust, competition, consumer protection and service reliability alter the mechanisms through which attention, search and repeat use operate. Yet contextual adaptation need not imply abandoning general principles. Measurement validity, clear decision rights, truthful disclosure, counterfactual reasoning and fair complaint resolution remain defensible requirements across settings, even when suitable instruments and thresholds differ.

The strongest African application is therefore comparative and interrogative rather than celebratory. FinScope and FinAccess show how careful survey designs can identify financial-service participation within well-defined populations. A business can build upon that evidence only after identifying the missing bridge to a specific purchase process. Ignoring that bridge leads to inflated market estimates and weakly founded investment; respecting it makes market knowledge both more useful and more honest.

14.13.4 Source reconciliation and the boundary between survey inference and business decisions

The primary FinScope 2024 publication deserves a specific source-reconciliation qualification. Its survey methodology reports a target of 14,000 households and 13,994 completed interviews, and its headline percentages of 96% total inclusion, 92% formal inclusion, approximately 86% mobile-money use and 77% personally registered mobile-wallet ownership are repeatedly stated. However, different narrative passages attach different absolute population counts to the 77% registered-wallet estimate, including approximately 5.8 million and 6.3 million. Because the reported counts cannot both be the same estimate under one denominator, this chapter retains the consistently reported percentage while not reproducing a disputed absolute count as an independently verified fact (AFR, 2024, pp. 11, 38, 72). A replicating analyst should consult the original weighted tabulations and survey documentation before reusing the absolute number.

The Kenya comparison adds a second denominator problem rather than resolving the first. Kenya FinAccess sampled persons aged sixteen and above but primarily reported financial-access findings for those aged eighteen and above, while Rwanda FinScope reports a sixteen-and-above adult frame. The construct called formal access may also be operationalized differently by country. Accordingly, the two published rates are presented as separately documented context, not as a harmonized ranking. In a firm-level research memorandum, the crucial next step would be a source crosswalk identifying household versus individual units, reference dates, weights, age restrictions, formal versus informal classifications, and the product-market assumptions needed to move from an access estimate to an addressable-market estimate. That translation must be argued, never assumed.

14.14 INTERFUNCTIONAL DEPENDENCIES AND RESPONSIBLE CUSTOMER VALUE

14.14.1 A common evidence contract across enterprise functions

Customer intelligence operates at the interfaces among marketing, strategy, operations, finance, technology and governance. Market researchers may identify a preference for rapid delivery, yet operations must determine whether speed can be achieved safely and finance must assess working-capital consequences.

CRM records may show customers 'lost' after late deliveries, but a complete diagnosis requires service capacity, inventory availability, route reliability, credit terms and data-quality checks. Customer experience is thus a system-level outcome. Improving one channel metric while transferring costs to workers or concealing product limitations does not constitute integrated enterprise performance.

The interfunctional relationship is reciprocal. Operations data can reveal whether customers received the promised offering; accounting distinguishes recognized revenue from cash collected and contribution after variable costs; people management shapes service competence and the psychological safety needed to report failure; information systems determine what can be measured reliably; governance sets permissible uses of personal data and makes remediation enforceable. The customer should not become an abstract 'asset' whose economic value legitimates unrestricted extraction. Rather, customer relationships create reciprocal obligations and require the enterprise to manage information as entrusted, context-dependent evidence (Kumar & Reinartz, 2018; Lemon & Verhoef, 2016).

Table 14.4. Cross-functional customer-intelligence responsibility and evidence register. *Original managerial instrument for accountable implementation.*

Function	Distinct decision responsibility	Evidence or control	Critical failure to monitor
Marketing/research	Define question, construct and inferential claim	Research brief, sampling and analysis note	Promoting correlations as causal answers
Sales/customer service	Record promises, feedback and remedy	Accurate contact and case history	Silencing or prematurely closing complaints
Operations	Validate actual service performance	Deliveries, quality and failure classification	Optimizing speed while neglecting safety
Finance	Reconcile receipts and contribution	Payment reconciliation and unit economics	Confusing booked revenue with realized value
Information systems	Preserve identity, access and lineage	Access logs, retention rules and audits	Unauthorized linkage or stale customer records
Governance/legal oversight	Authorize use and resolve high-risk conflicts	Legal-basis register and escalation decisions	Treating technical capability as authorization

The resulting analytical claim is conditional: customer understanding contributes to enterprise value when a valid observation is linked to an identifiable decision mechanism, feasible operational response, financial sustainability and justified treatment of stakeholders. It can fail at each link. Better research will not remedy a provider's inability to deliver; excellent delivery records do not establish customer understanding if dissatisfied nonusers remain invisible; and a profitable personalization system is indefensible if it relies on unlawful or manipulative practices. This interdependence prepares the transition to Chapters 15 and 16 without reproducing their technical ownership of offerings, pricing, selling and channel execution.

14.14.2 Integrating evidentiary authority with operational responsibility

Cross-functional integration requires a shared evidence contract rather than a large centralized dashboard. Each function should agree on the customer unit, event definition, temporal cut-off, source lineage and the kind of inference the indicator permits. The marketing team cannot describe a payment failure as customer dissatisfaction without corroboration, while finance cannot treat a transaction as an economically valuable retained relationship before refunds and service costs are considered. Operations must have authority to correct documented quality failures, and the privacy function must be able to contest uses of data that exceed the stated legitimate purpose. A decision record should name the owner of the proposed

intervention, the evidence that supports it, the evidence that could overturn it and the resulting responsibilities for customer remedy.

The resulting configuration is a conceptual proposition rather than an observed universal best practice. It predicts that accountability will be more defensible where research definitions, operational events and decision rights are reconciled before performance claims enter executive reporting. Testing that proposition would require variation in governance arrangements and measured service outcomes, with credible attention to company size, technological capability, market conditions and prior performance. Its practical use in the meantime is diagnostic: it reveals where research conclusions cannot be acted upon, where operational outcomes are absent from the data, and where no named authority can correct a foreseeable harm.

14.15 CRITICAL SYNTHESIS, RESEARCH AGENDA AND CONCLUSION

The chapter's theoretical traditions disagree about the stability and location of preferences. Economic choice models emphasize feasible alternatives and trade-offs; planned-behavior accounts highlight attitudes, norms and perceived control; behavioural economics identifies framing and reference dependence; constructive-choice research treats preferences as partly formed during the decision; sociological and diffusion approaches expose social relationships and institutional conditions. These theories should not be collapsed into one predictive formula. Their value lies in making different observable implications explicit. If customers endorse a service yet fail to adopt it, the researcher must examine control, transaction costs and alternatives rather than presume a single psychological deficiency. If purchases persist despite complaints, switching constraints, habit and relationship commitments offer rival explanations. The explanatory achievement is discrimination among plausible mechanisms, not a universal catalogue of factors.

A parallel disagreement concerns what customer data can establish. Attitude surveys can measure constructed responses under particular instruments; administrative records capture selected transactions; qualitative accounts illuminate situated meaning; experiments estimate identified treatment effects when their assumptions hold; and AI predictions characterize statistical regularities in the data-generating system. Each can contribute, yet none alone warrants all the descriptive, causal and normative conclusions management might wish to draw. A defensible customer-intelligence system makes these differences explicit and revisable.

14.15.1 Boundary conditions and proposed integrative model

A useful integrative model should be explicit about its analytical boundaries. This chapter proposes that customer intelligence becomes decision-worthy only if four tests are satisfied together: construct adequacy, inferential warrant, operational feasibility and justified treatment of affected people. Construct adequacy asks whether the measured quantity corresponds to the consumer phenomenon the decision requires; inferential warrant asks whether the sampling and design support the proposed descriptive, predictive or causal claim; operational feasibility asks whether the enterprise can deliver the recommended change at sustainable cost; and justified treatment asks whether the decision respects relevant duties, fair participation and rights of remedy. The tests are neither assumed independent nor offered as a validated numerical index. Failure of any one test can undermine a recommendation even when the others appear strong.

The model is deliberately asymmetric. Evidence that a measure is invalid cannot be compensated for by a promising return-on-investment projection; an unlawful use of customer information cannot be validated by forecasting accuracy; and a legally permissible intervention can remain ineffective or unaffordable. This differs from a single weighted managerial scorecard in which an attractive value on one dimension can conceal an unacceptable failure on another. The analytical contribution is thus a set of non-substitutable conditions for responsible managerial inference, suitable for critical comparison and future empirical testing

rather than a claim of theoretical novelty beyond the existing literatures on evidence, customer relationships and accountable governance.

The synthesis yields several propositions suitable for future empirical assessment. First, improved identity resolution should reduce measured duplicate-customer error, but the net benefit will depend on privacy risks and shared-account prevalence. Second, complaint accessibility may initially increase recorded complaint rates while improving substantive accountability, so short-run complaint counts may be inversely related to governance quality. Third, the association between digitally recorded engagement and retention may weaken after accounting for channel access, service reliability and household sharing. Fourth, decision quality may improve when the research brief requires alternative explanations and pre-specified action criteria, although the size and generality of any effect remain unknown. Fifth, AI-assisted classification could improve workflow speed while worsening subgroup validity where language or customer representation is inadequate. These are *research propositions*, not demonstrated findings.

A rigorous future programme could use licensed, anonymized administrative panels to assess retention measurement; harmonized survey modules to examine access and nonadoption; qualitative process tracing to study trust and complaint resolution; pre-registered field experiments to compare service interventions; and institutional documentary analysis to assess rights and enforcement. Designs should disclose selection and attrition, plausible counterfactuals, temporal limitations, appropriate uncertainty and the possibility that vulnerable populations may be less observable. Research in Rwanda and comparable African markets should not simply replicate imported questionnaires: it should establish locally meaningful constructs, accessible language, valid denominators and defensible theories of institutional context.

The central conclusion is that customer intelligence deserves to be treated as a disciplined organizational responsibility rather than an inventory of data or a formula for persuasion. Its minimum intellectual conditions are clearly specified decision contexts, behavioural explanation, valid measurement, explicit uncertainty and opportunities for correction. Its minimum ethical conditions are truthfulness, proportionality, privacy, fairness and effective remedy. When those conditions hold, enterprise decisions can become more informed without reducing the people served to clicks, predicted revenue or manipulable psychological variables. That conclusion is both a specialist contribution to marketing research and a necessary part of the book's account of responsible, integrated enterprise performance.

Taken together, the analysis establishes a hierarchy of responsibilities rather than a checklist of techniques. Purchasing decisions must first be situated within the correct individual, household or institutional unit; theories must then be tested against the feasible alternatives and explanatory mechanisms of that setting. Observations require valid measurement and defensible population boundaries before they can support managerial inference. Customer records, retention estimates and economic valuations need explicit identity, timing and cost assumptions, while national financial-inclusion figures must remain measures of financial participation rather than proxies for product demand. Finally, the proposed action must be operationally feasible and open to correction without sacrificing consumer privacy, fair access, comprehensible information or effective remedy. The intellectual contribution lies in preserving these distinctions across functional boundaries.

14.16 KEY CONCEPTS, EDUCATIONAL ASSESSMENT AND FURTHER READING

14.16.1 Key concepts and working definitions

The following operational glossary preserves the distinctions needed for research design and managerial interpretation. Terms that are closely related in ordinary business usage are separated when they imply different measurement units or forms of evidence.

Term	Working definition

Term	Working definition
Consumer behaviour	Situated selection, acquisition, use, evaluation and discontinuation of offerings.
Buying centre	Individuals and roles involved in specifying, authorizing, influencing and using an organizational purchase.
Construct	An attribute whose meaning must be specified before it can be measured.
Causal estimand	The explicitly defined effect of one intervention relative to another in a stated target population.
Customer journey	An analytically mapped and potentially recursive sequence of customer touchpoints and experiences.
Customer intelligence	Evidence-based, governed interpretation of customer-relevant observations for accountable decisions.
Customer relationship management (CRM)	Coordinated processes and technologies for managing interactions, service quality and enduring relationships.
Cohort	Population identified by a qualifying common start event and time origin.
Retention and churn	Continued qualifying participation and corresponding defined loss from a shared at-risk population.
Customer lifetime value (CLV)	Expected discounted contribution net of specified costs under disclosed assumptions.
Selection bias	Systematic distortion when the observed units are not representative for the intended inference.
Measurement validity	Evidence that scores or observations justify the specific interpretation and decision use.
Differential privacy	A formal framework that bounds the disclosure of information from statistical computations under a specified mechanism.
Censoring	Incomplete observation of a unit's future event history during a defined study window.

14.16.2 Questions for conceptual and critical assessment

Foundational questions. Explain why a registered mobile-money account and a distinct paying customer are not equivalent statistical units. Contrast attitude, intention, behavior and loyalty with a concrete service example. Reconstruct the customer journey and explain two circumstances in which a buyer may bypass conventional stages. Distinguish the inferential purpose of an interview, a probability survey and a randomized interface experiment. Explain why greater complaint reporting can coexist with better organizational accountability.

Advanced discussion. Critically evaluate the explanatory reach of the theory of planned behaviour and prospect theory for a recurring essential-service purchase. Assess the claim that a 96% national financial-inclusion estimate proves that an online-only retail model is feasible. Defend or reject the proposition that an enterprise should maximize predicted CLV, taking account of survival modeling, vulnerable consumers, privacy and cross-functional costs. Explain how shared household accounts challenge customer-level CRM analytics and propose a proportionate correction process. Evaluate whether a language model's simulated

responses can replace real respondents, stating the empirical evidence that would be required before making such a claim.

14.16.3 Applied cohort and research-design exercises

Exercise A: cohort arithmetic (LO7). Using Table 14.2, recompute each first-month retention percentage, the pooled first-month rate, January's month-two retention relative to acquisition, and the conditional month-two transition. Explain why March's month-three outcome is missing, not zero. Recalculate net CLV under the stated formula when the acquisition cost increases to RWF 11,000, and state which assumptions would invalidate the result for a seasonal buyer.

Exercise B: inferential audit (LO4–LO6). A company observes 65% thirty-day repeat purchasing among mobile-money customers and 52% among cash customers. Without assuming the company randomly assigned payment method, develop at least three rival explanations, specify the data needed to investigate each and design an ethical comparison. Your answer must distinguish the observed 13-percentage-point difference from a causal effect and specify how device access, location and service quality affect interpretation.

Capstone assessment: Rwanda research memorandum (LO1–LO8). Prepare a 2,500–3,500-word decision memorandum for the hypothetical Kigali household service provider. Use only sources you can document: AFR FinScope 2024, NISR survey/census documentation, Kenya FinAccess 2024, relevant primary Rwandan legal instruments and appropriate peer-reviewed methods. Define the decision, eligible population, key constructs, research questions and precise boundaries of available evidence; formulate a secondary-data analysis protocol; produce one journey map and one metric dictionary; audit two plausible sources of bias; and recommend a proportionate pilot with explicit measures of effectiveness, fairness and remedy. Any illustrative assumptions must be labeled as such; no primary research or customer-specific result may be invented.

14.16.4 Educator guidance and scoring criteria

For the capstone assessment, a 100-point analytic rubric allocates 15 points to accurately specifying purchasing context and comparing theories, 20 to construct quality and source provenance, 15 to methodological validity and counterfactual reasoning, 15 to reproducible cohort and discounted-value calculations, 15 to Rwanda-specific interpretation and international comparability, 10 to consumer rights and inclusion, and 10 to coherent evidence-based scholarly argumentation. An excellent submission recognizes that official financial inclusion does not measure online purchase demand, that self-selection prevents causal attribution from the payment-method contrast, and that aggregate CRM performance cannot establish the circumstances of excluded customers. Mathematical correctness is necessary but not sufficient: learners should be credited for identifying when a calculation answers the wrong question.

For assessment alignment, LO1–LO3 are tested through decision-role maps and theory-based journey interpretations; LO4–LO5 through the research brief, sampling critique and experimental reasoning; LO6 through CRM and legal-basis analysis; LO7 through the fully disclosed cohort and discounted-value exercise; and LO8 through the capstone memorandum's integrated recommendation and revision plan. Instructors should require students to cite the exact edition and population definition of national datasets, disclose sources not accessed, and differentiate observed figures from constructed examples.

Selected further reading. Bettman, Luce and Payne (1998) provide a sophisticated account of constructed preferences; Lemon and Verhoef (2016) offer a cross-touchpoint customer-journey synthesis; Kohavi, Tang and Xu (2020) explain experimental design and diagnostic failures; Kumar and Reinartz (2018) develop CRM as a management system; and the original AFR (2024) and Kenya FinAccess (2024) reports illustrate the importance of sampling frames, conceptual definitions and careful comparison.

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