



Learning Outcomes

Analytical Thinking

Core & Specialized Credentials

International Certification Alliance

Version 1.0 — August 2026



LICENSING INFORMATION

The work in this document was facilitated by the International Certification Alliance (ICA) and done through the contributions of various experts and practitioners. These learning objectives are intended to help the growing Tomorrow-Ready™ community worldwide.

This work is licensed under the Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License. To view a copy of this license, visit <http://creativecommons.org/licenses/by-nc-nd/4.0/> or send a letter to:

Creative Commons,
P.O. Box 1866,
Mountain View, CA 94042, USA

YOU ARE FREE TO:

Share — copy and redistribute the material in any medium or format

UNDER THE FOLLOWING TERMS:

Attribution: You must give appropriate credit to The International Certification Alliance (ICA), provide a link to the license, and indicate if changes were made. You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use.

NonCommercial: You may not use the material for commercial purposes.

NoDerivatives: If you remix, transform, or build upon the material, you may not distribute the modified material.

NOTICES:

You do not have to comply with the license for elements of the material in the public domain or where your use is permitted by an applicable exception or limitation.

No warranties are given. The license may not give you all of the permissions necessary for your intended use. For example, other rights such as publicity, privacy, or moral rights may limit how you use the material.



TABLE OF CONTENTS

LICENSING INFORMATION	2
TABLE OF CONTENTS	3
HOW TO READ THIS DOCUMENT	4
CORE CREDENTIAL LEARNING OUTCOMES	5
Analytical Thinking Core	5
SPECIALIZED CREDENTIAL LEARNING OUTCOMES	8
Problem Framing and Root Cause Analysis	8
Evidence Quality	10
Insight Storytelling	11
Reasoning Quality	12
Systems Mapping	13
AI and Human Judgment	14
Innovation and Creative Problem Solving	15
Competitive Analysis and Positioning	17
AI for Customer Insights	20
CX Metrics and ROI	22
Voice of the Customer Programs	24
AI for Product Metrics	26
Product Discovery and Experimentation	28
Measuring Product Value	30
Diagnosing Learning & Performance Needs	32
Measuring Change	35
Decision-Making Under Uncertainty	37
SPECIAL THANKS	38

HOW TO READ THIS DOCUMENT

This document outlines the learning outcomes that accredited member organizations must address to offer ICA's Analytical Thinking certification. To achieve a certification, a learner must complete the core credential plus at least two specialized credentials.

Each learning outcome (LO) follows a particular pattern, described below.

O.O Learning Outcome Name

Additional Context, describing why this Learning Outcome is important or what it is intended to impart.

The learning outcome's purpose further describes what is expected to be imparted to the learner (e.g., a key point, framework, model, approach, technique, or skill).

CORE CREDENTIAL LEARNING OUTCOMES

Analytical Thinking Core

Analytical Thinking is an 8-hour Core Credential for professionals who need to reason clearly, evaluate evidence, and turn information into useful insight, a capability that matters more, not less, as AI and automation take on more routine information-processing work.

1. Framing and Structured Reasoning

1.1 Analytical Thinking as Structured Inquiry

Professionals often work with ambiguous problems, incomplete information, and conflicting perspectives. Analytical thinking provides a disciplined way to slow down, question assumptions, and separate evidence from opinion.

Build learners' understanding of analytical thinking as a repeatable practice for improving clarity, reasoning, and judgment.

1.2 Problems, Questions, and Assumptions

Weak analysis often begins with a poorly framed question or an untested assumption. Clarifying what is being analyzed early helps prevent effort being spent on the wrong problem.

Develop learners' ability to define the question being analyzed and surface assumptions that may shape conclusions.

2. Evidence, Data, and Information Quality

2.1 Patterns, Uncertainty, and Limitations

Data and information, increasingly including AI-generated outputs and model recommendations, can reveal meaningful patterns but can also mislead through sampling issues, confounding, outliers, or overconfidence. Interpretation requires appropriate caution.

Develop learners' ability to question patterns, identify uncertainties, and name limitations found in data rather than accepting it at face value. Build the ability to question what's missing, what assumptions are being made, and what could be wrong.

2.2 Evidence Quality and Relevance

Organizations have abundant information, but not all of it is reliable, relevant, timely, representative, or sufficient. Evidence can be sound and still be about something else. Evidence quality and suitability needs to be judged before conclusions are drawn.

Develop learners' ability to judge whether the evidence in front of them speaks to the question being asked.

2.3 Judging Analysis You Did Not Produce

Analytical work increasingly arrives already complete – clearly summarised and synthesised. Just because the output is confidently worded is no guarantee that the underlying evidence exists, is relevant, or has been represented accurately.

Develop learners' ability to interrogate analysis they did not produce, including analysis produced by a tool. Cover what can and cannot be verified, which claims carry the most risk if they are wrong, and why confident presentation and sound reasoning are unrelated.

3. Analysis, Insight, and Explanation

3.1 Comparing Causes and Options

Complex situations often have multiple possible causes and responses. Structured techniques help compare explanations, test hypotheses, and distinguish symptoms from underlying causes.

Develop learners' ability to use structured analysis to compare possible causes or options.

3.2 Insight from Incomplete Information

Analysis rarely happens with perfect information. Useful insight requires synthesizing what is known, making gaps visible, and being transparent about uncertainty rather than pretending it has disappeared.

Develop learners' ability to form bounded, defensible insight from incomplete evidence.

4. Communicating Conclusions and Learning

4.1 Reasoned Conclusions and Limitations

Strong analysis can still fail if conclusions are unclear, unsupported, or overstated. Audiences need to understand the recommendation, rationale, confidence, and remaining limitations.

Develop learners' ability to communicate reasoned conclusions clearly enough to support responsible action and decision-making.

4.2 Reasoning Quality and Improvement

Reasoning can be distorted by bias, blind spots, group pressure, or weak logic. Review practices help reveal these problems and improve reasoning over time.

Develop learners' ability to identify weaknesses in reasoning and improve future practice.

SPECIALIZED CREDENTIAL LEARNING OUTCOMES

Problem Framing and Root Cause Analysis

Problem Framing and Root Cause Analysis is a 2–4 hour Specialized Credential for professionals who want to develop their ability to define problems clearly, distinguish symptoms from causes, and focus analysis on the right question. The course focuses on framing discipline, assumptions, causal inquiry, and problem statements that support action. Learners will explore the value of framing, assumptions and boundaries, causal inquiry, and problem–statement quality.

1.1 The Value of Framing

Teams often analyze the first version of a problem they hear. This can lead them to solve symptoms, preferences, or inherited assumptions rather than the underlying issue.

Build learners' understanding of problem framing as a critical first step in analysis.

2.1 Assumptions and Boundaries

Problem definitions are shaped by what is included, excluded, assumed, and valued. Making these choices visible helps prevent the frame from being mistaken for objective reality.

Develop learners' ability to make the boundaries of a problem definition visible and testable. Cover what has been included, what has been left out, and whose view of the problem the frame reflects.

3.1 Causal Inquiry

Root-cause work becomes superficial when familiar explanations or visible symptoms are accepted as causes too quickly. A disciplined inquiry separates symptoms from underlying causes and explores contributing factors, interactions, and the evidence needed to test them.

Develop learners' ability to conduct a structured root-cause analysis that distinguishes symptoms from underlying causes.

4.1 Problem Statement Quality

A useful problem statement is specific, evidence-informed, actionable, and neutral enough to allow more than one possible solution.

Develop learners' ability to assess and strengthen problem statements before solution design begins.

Evidence Quality

Evidence Evaluation and Information Quality is a 2–4 hour Specialized Credential for professionals who want to develop their ability to assess whether evidence is credible, relevant, sufficient, and fit for purpose. The course focuses on source quality, data limitations, evidence gaps, triangulation, and responsible use of information. Learners will explore what makes evidence strong, source and data limitations, evidence synthesis, and fitness for a conclusion.

1.1 Evidence Quality in Analysis

Available information is not automatically good enough for the question being asked. Evidence quality directly affects the confidence that can reasonably be placed in analysis and recommendations.

Build learners' understanding of the dimensions that make evidence more or less useful for reasoning and analysis.

2.1 Source and Data Limitations

Evidence may be biased, incomplete, outdated, unrepresentative, or misinterpreted. These limitations need to be understood before conclusions are formed.

Develop learners' ability to assess the strengths and weaknesses of sources and data.

3.1 Evidence Synthesis

Useful analysis often requires multiple sources rather than one piece of evidence. Responsible synthesis makes agreement, contradiction, and unresolved gaps visible and guards against confirmation bias, where people read evidence to confirm what they already believe.

Develop learners' ability to combine evidence transparently without hiding conflict, uncertainty, or letting bias shape the reading.

4.1 Evidence Fitness for a Conclusion

A conclusion can sound persuasive while still being stronger than the available evidence supports. Claims, evidence, and confidence need to stay aligned.

Develop learners' ability to challenge overstatement of conclusions and assess whether evidence is sufficient for a conclusion.

Insight Storytelling

Insight Storytelling is a 2–4 hour Specialized Credential for professionals who want to develop their ability to interpret data responsibly and communicate insights in ways that support understanding and action.

1.1 From Data to Insight

Reports can present numbers without clarifying what they mean, why they matter, or what action follows. Insight adds interpretation and relevance to raw information.

Build learners' understanding of how interpretation turns data into useful insight without overstating the evidence.

2.1 Data Patterns and Limitations

Patterns can be meaningful, random, distorted, or context-dependent. Interpretation needs to consider variation, outliers, uncertainty, and alternative explanations.

Develop learners' ability to interpret patterns with appropriate caution and context as the basis for a clear, honest data story.

3. Audience-Centered Insight Stories

Different audiences need different levels of detail, context, and recommendation. Communicating insight is more useful when it is organized around what the audience needs to understand and do.

Develop learners' ability to turn analysis into a clear narrative, including appropriate visual choices, suited to a defined audience.

4. Reviewing Communication Quality

Data communication can be misled through poor visuals, missing caveats, selective evidence, or unclear recommendations. Review helps protect clarity and integrity before it is shared.

Develop learners' ability to assess data communication for clarity, integrity, and usefulness.

Reasoning Quality

Reasoning Quality is a 2–4 hour Specialized Credential for professionals who want to develop their ability to identify reasoning traps, challenge assumptions, and improve the quality of their reasoning and judgment.

1.1 Importance of Reasoning Quality

Reasoning errors often come from overconfidence, motivated reasoning, group pressure, or hidden assumptions rather than lack of intelligence. Reasoning quality can be improved through deliberate practice.

Build learners' understanding of how reasoning quality affects analysis, judgment, trust, and outcomes.

2.1 Bias and Assumptions in Reasoning

Bias is difficult to see from inside one's own reasoning. Common cognitive biases shape conclusions quietly. Surfacing assumptions and alternative explanations helps reveal where logic may be incomplete or distorted.

Develop learners' ability to identify cognitive biases and untested assumptions that weaken reasoning. Cover common biases such as confirmation bias, anchoring, availability, and overconfidence.

3.1 Reasoning Review Practices

Reasoning improves when teams create habits for constructive challenge, feedback, and reflection before decisions are finalized.

Develop learners' ability to design review practices that strengthen reasoning without making challenges adversarial.

4.1 Improvement in Reasoning Quality

Better reasoning should show up through clearer assumptions, stronger evidence, better questions, and more transparent conclusions rather than increased confidence alone.

Develop learners' ability to recognize what stronger reasoning looks like and how to track its improvement.

Systems Mapping

Systems Mapping is a 2–4 hour Specialized Credential for professionals who want to develop their ability to visually represent a system's structure and use that map to diagnose where recurring problems actually come from.

1.1 Impact of Visual System Mapping

Narrative descriptions can hide relationships, loops, delays, and dependencies by turning a system into a sequence of events or list of actors. Mapping makes those structures explicit.

Build learners' understanding of the impact mapping has as a distinct step in systems analysis rather than only an illustration.

2.1 System Elements, Relationships, and Feedback

Useful system maps depend on identifying the actors, conditions, relationships, and feedback loops that actually shape behavior. Missing an important relationship can distort the whole map.

Develop learners' ability to identify the structural elements that belong in a system map.

3.1 Building a System Map Design

Creating a usable map requires invisible assumptions to be made explicit. Decisions about scope, level of detail, delays, handoffs, collaboration, and feedback loops. The result needs to be clear enough for someone other than the author to follow.

Develop learners' ability to produce a system map that is both diagnostically useful and understandable to others. Cover the scoping and detail decisions that determine whether a map is usable, and how to test it against a reader rather than against the author's own understanding.

4.1 Diagnosing from the Map

A map becomes useful when it helps explain why a problem keeps recurring or where the system structure is producing the visible symptom.

Develop learners' ability to use a system map as a diagnostic tool rather than a static artifact.

AI and Human Judgment

AI and Human Judgment is a 2–4 hour Specialized Credential for professionals who want to develop their ability to make clear, confident decisions about when to rely on AI outputs, when to override them, and when not to use AI at all. As AI systems become faster and more capable, the pressure to defer to their outputs increases – even in situations where human judgment is more reliable, more accountable, or more appropriate. This course builds the practical decision-making discipline needed to work with AI as a capable assistant rather than an unquestioned authority, including the ability to recognize the specific evidence that should prompt an override and to calibrate that judgment over time using real outcomes.

1.1 Conditions that Drive AI Over-Reliance

Over-reliance on AI is often driven by time pressure, confident AI outputs, social expectations, and the convenience of accepting a ready-made answer rather than by lack of knowledge alone. Automation is where the error cost is highest since nothing is left to catch it.

Help learners understand AI over-reliance as a behavioral and organizational challenge that can be countered through deliberate practices. Cognitive conditions such as automation bias or cognitive ease. Behavior conditions such as skill atrophy or diffusion of responsibility.

2.1 Human-AI Decision Boundaries

AI adds different value across different decisions. Sound judgment requires clear boundaries for when AI can lead, when it needs verification, when human judgment should take precedence, and when the decision should not involve AI at all.

Build learners' ability to make explicit, defensible decisions about the appropriate role of AI and the evidence that should change that role. For example, an AI's role in a given decision could be to lead, to verify, or to defer to human judgment, depending on the decision's stakes and the evidence available.

3.1 Maintaining and Calibrating Independent Judgment

Independent judgment is difficult to sustain when overriding AI feels slower, riskier, or socially discouraged. Judgment also improves when past decisions are compared with actual outcomes.

Develop a repeatable practice that helps learners maintain independent judgment and calibrate it over time based on actual outcomes.

4.1 Organizational Conditions for Sound Human-AI Judgment

Individual judgment is difficult to sustain when organizational norms reward speed over accuracy or treat AI outputs as authoritative by default.

Help learners see human-AI judgment as an organizational design issue as well as an individual capability.

Innovation and Creative Problem Solving

Innovation and Creative Problem Solving is a 2–4 hour Specialized Credential for professionals who want to develop their ability to generate novel, useful responses to problems that familiar approaches cannot solve.

1.1 What is Creative Problem Solving

Creativity is not a personality trait some people have, or a workshop the organization runs occasionally, rather it is a disciplined way of generating options once the obvious ones have run out.

Define creative problem solving as a structured approach that combines divergent thinking (generating multiple ideas) with convergent thinking (evaluating and refining) to produce novel, viable solutions. Emphasize that it differs from routine problem-solving because it explicitly challenges assumptions and constraints rather than accepting them. Illustrate how organizations rely on creative problem solving to drive innovation such as in developing new products, improving processes, or responding to disruptive challenges.

2.1 Reframing Problems to Open New Possibilities

Most problems that feel stuck are stuck because of an assumption that has never been questioned.

Build learners' ability to surface and challenge assumptions so they can reframe problems and open new possibilities. Challenge a range of assumptions such as who the solution is for, what constraints are fixed versus moveable, what counts as success, or what the problem actually is. This helps build the skill of reframing – the disciplined identification and interrogation of the assumptions that are limiting what solutions seem possible.

3.1 Idea-Generation Processes

Generating new and innovative ideas requires more than a brainstorming technique.

Develop learners' ability to create conditions that support genuine idea generation and test those conditions in practice. Cover the challenges that limit innovative ideas (such as: evaluation of ideas happens too early, social norms suppress unconventional suggestions, the problem is defined too narrowly, and the people in the room all share the same perspective) and approaches to address those challenges.

4.1 Moving from Ideas to Selection

Creative ideas often stall between generation and action.

Build learners' judgment for evaluating early-stage ideas and moving the strongest options forward. Some of the challenges in moving ideas forward are: indecision, risk aversion, unclear ownership, and the existing ways of working, etc. Introduce criteria for evaluating ideas such as potential value, risk, cost of delay, key assumptions, testability.

Competitive Analysis and Positioning

Competitive Analysis and Positioning is a 2–4 hour Specialized Credential for professionals who want to develop their ability to analyze an industry's competitive structure and translate that analysis into a defensible strategic position. Many strategic plans skip straight to ambition, entering a new market, launching a new offering, without first understanding the competitive forces that will determine whether that ambition can succeed.

1.1 Industry Structure and Strategic Viability

Competitor behavior is shaped by the structure of the industry around it. Concentration, buyer power, supplier power, substitutes, and entry barriers influence which strategic moves are likely to succeed.

Build learners' understanding of industry structure as distinct from the actions of individual competitors. Cover the risks and opportunities from non-industry players entering and competing for the same customer outcome.

2.1 Competitor Behavior and Capability

Competitors differ in what they are likely to do and what they are capable of doing.

Develop learners' ability to assess competitors separately on both likely intent and execution capability. Consider factors such as each competitor's resources, talent, technology, distribution, and strategic incentives individually.

3.1 Defensible Competitive Position

Easy-to-copy positions don't last. Sustainable competitive advantage requires deliberately designing defensibility into your position, not just hoping your execution stays ahead.

Develop learners' ability to design a competitive position with a clear mechanism that makes imitation difficult. Defensibility may come from scale, proprietary assets, switching costs, or accumulated capabilities.

4.1 Competitive Position Under Competitor Response

Competitive positions invite responses. Organizations that identify which competitor responses they're least prepared for can strengthen defensibility before competitors exploit the gap.

Develop learners' ability to assess whether a competitive position remains defensible under likely competitor responses. Build learners' understanding that competitive positions invite responses. The question isn't whether competitors will respond, but how. Introduce competitor responses such as copying advantage, attacking weaknesses, moving upmarket or downmarket, building alternative solutions, increasing spending, or engaging partners to neutralize advantage.

AI for Customer Insights

AI for Customer Insights is a 2–4 hour Specialized Credential for professionals who want to use artificial intelligence to deepen customer understanding, accelerate sense-making, and improve the quality and speed of customer insight. The credential focuses on using generative, analytical, and emerging agentic AI to work with large volumes of structured and unstructured customer evidence; surface patterns, themes, sentiment, behaviors, and meaningful customer differences; strengthen research and feedback workflows; and generate hypotheses that can be tested with real customers. AI can dramatically reduce time-to-insight, but it can also create convincing patterns that are incomplete, biased, poorly grounded, or disconnected from actual customer experience.

1.1 Insight Questions and AI Fit

AI can produce summaries, personas, predictions, and recommendations quickly, but speed does not guarantee useful insight. Poorly framed questions, weak source data, or using AI for a task it is not suited to can create confident output without improving customer understanding.

Develop learners' ability to begin with a clear customer-insight question and determine where AI can add value. Introduce the differences among generative, analytical, predictive, and emerging agentic uses of AI at a practical level; consider the evidence available, the decision the insight should inform, and where human or direct customer research is still required.

2.1 AI-Assisted Synthesis and Pattern Detection

Customer evidence is increasingly spread across surveys, interviews, support interactions, reviews, call transcripts, behavioral data, digital interactions, images, and other sources. Manual analysis can miss patterns or take too long, while AI can surface themes at scale but can also amplify noisy, unrepresentative, or contradictory signals.

Develop learners' ability to use AI to synthesize structured and unstructured customer evidence and surface themes, sentiment, behaviors, friction, emerging needs, and meaningful differences among customer groups. Explore triangulation across sources, contradiction and outlier detection, basic clustering or segmentation support, and the importance of tracing an AI-generated insight back to the underlying evidence.

3.1 AI-Assisted Research and Hypothesis Generation

AI can help create interview guides, adapt follow-up questions, conduct conversational feedback, summarize interviews, identify research gaps, and simulate possible customer responses. These capabilities can expand the speed and reach of research, but poorly designed use can lead questions, flatten nuance, or mistake synthetic output for actual customer voice.

Develop learners' ability to use AI as a research partner across the customer-insight workflow. Explore AI-assisted research design, conversational or adaptive feedback, interview and qualitative synthesis, hypothesis generation, and synthetic customers or simulated feedback as tools for exploration—not validation. Reinforce when and how to return to real customers to test important assumptions.

4.1 Validation, Governance, and Human Judgment

AI-generated customer insights can sound authoritative even when they are based on incomplete data, hidden assumptions, poor representation, model bias, or inappropriate use of sensitive customer information. The risk increases when AI-generated summaries or recommendations move directly into decisions without validation.

Develop learners' ability to evaluate whether an AI-generated customer insight is sufficiently grounded and appropriate for action. Explore source provenance, representativeness, hallucination and inference risk, privacy and consent, bias and inclusion, confidence and uncertainty, human review, and proportional validation based on the consequence of the decision. Introduce the Tomorrow-Ready discipline of using AI to accelerate learning without surrendering accountability for the judgment.

CX Metrics and ROI

CX Metrics and ROI is a 2–4 hour Specialized Credential for professionals who need to measure customer experience in a way that supports learning, improvement, and business decisions. The credential can stand alone or be combined with other customer–centricity credentials. It begins with a critical distinction: desired customer outcomes or experience aspirations—such as greater trust, lower effort, stronger loyalty, or greater delight—are not the same thing as the metrics used to assess them. NPS, CSAT, CES, retention, and other measures are indicators, not goals in themselves.

1.1 Outcomes, Measures, and the Limits of Scores

Organizations can confuse the metric with the outcome they actually care about. A target such as 'raise NPS' can become the goal, encouraging teams to optimize the score rather than improve trust, ease, loyalty, confidence, or another underlying customer outcome. Scores are useful signals, but they are proxies for something more important.

Build learners' ability to separate desired customer outcomes or experience aspirations from the measures used to assess them. Explore why metrics are indicators rather than goals, the risks of score fixation and gaming, and the value of combining perception, behavioral, operational, and business measures to understand whether the underlying experience is actually improving.

2.1 CX Metrics and Measurement Fit

Different measures answer different questions. Net Promoter Score (NPS), Customer Satisfaction (CSAT), Customer Effort Score (CES), retention, repeat behavior, complaints, service measures, and customer lifetime value can all be useful, but none is universally meaningful without a clear outcome or decision question.

Develop learners' ability to begin with the desired outcome or learning question and then select the smallest useful set of measures that provides a balanced view. Introduce common CX metrics and their strengths and limitations, and show how perception, behavior, operations, and business outcomes can be combined when one measure is insufficient.

3.1 CX Drivers, Business Impact, and ROI

Customer-experience measures create limited strategic value when they remain disconnected from the drivers of the experience and from business outcomes. At the same time, organizations can overclaim impact by assuming that a change in a score directly caused a financial result.

Develop learners' ability to connect experience drivers to customer outcomes, customer behavior, and business value. Explore relationships such as effort to adoption, trust to retention, or service failure to cost-to-serve; introduce customer lifetime value and other economic outcomes where relevant; and distinguish correlation from causation when estimating the ROI of an experience improvement.

4.1 Decision-Oriented CX Insight

CX reporting can become a collection of dashboards and score trends that tells leaders what changed without explaining why it matters or what should happen next. Measurement creates value when it supports a decision, investment, or improvement action.

Develop learners' ability to translate CX evidence into a concise decision narrative: what outcome matters, what the evidence shows, what appears to be driving it, how confident the organization should be, why it matters to the business, and what action or decision the evidence supports.

Voice of the Customer Programs

Voice of the Customer Programs is a 2–4 hour Specialized Credential for professionals who want to develop their ability to design and operate systematic listening infrastructure that turns customer signals into actionable organizational insight. While many organizations collect customer feedback, few have the structures in place to synthesize it consistently, route it to the right decision-makers, and close the loop in ways customers notice. This course equips practitioners to move beyond ad hoc listening toward VoC as a continuous organizational-learning capability, not simply a feedback-collection mechanism, one that drives continuous improvement.

1.1 Voice of the Customer as a Continuous System

Organizations often treat Voice of the Customer as a periodic survey, research exercise, or feedback channel. This creates snapshots rather than an ongoing understanding of what customers need, experience, and value as those things change over time.

Build learners' understanding of VoC as an always-on, proactive sensing and learning capability across the full customer lifecycle. VoC should help the organization continuously understand both common patterns and meaningful differences across customers, rather than reducing the customer base to a single average view. Clarify the difference between raw feedback, customer signals, insight, and action, and show how VoC connects listening, interpretation, decisions, action, and learning rather than operating as a separate program.

2.1 Customer Listening Methods and Trade-offs

No single listening method provides a complete view of the customer.

Develop learners' ability to design a listening system that combines complementary sources across the customer lifecycle. Surveys, interviews, reviews, support interactions, behavioral data, frontline observations, and other signals each reveal different things and carry different biases, costs, timing, and coverage limitations. Explore solicited and unsolicited feedback, qualitative and quantitative evidence, behavioral signals, frontline or employee insight, transactional and relationship listening, and trade-offs involving depth, scale, timing, representativeness, customer effort, and feedback fatigue.

3.1 Synthesis, Customer Differences, and Decision Integration

Collecting more customer feedback does not automatically produce better decisions. Signals can conflict, reflect only the loudest customers, or remain trapped in dashboards and reports without becoming useful insight.

Develop learners' ability to synthesize and triangulate customer signals into credible, decision-relevant insight. Explore patterns and contradictions across sources, evidence strength, recurring versus isolated issues, and meaningful differences in customer needs, behaviors, expectations, context, or value. Introduce segmentation and personas as ways to organize those differences when doing so improves understanding or decision-making, while avoiding stereotypes or segments unsupported by evidence. Connect resulting insights to the product, service, policy, or strategic decisions they should inform.

4.1 Closed-Loop VoC and Organizational Learning

Customer feedback loses credibility when customers or employees repeatedly raise issues and nothing appears to change. Following up with one customer is useful, but mature VoC also addresses recurring patterns and changes the underlying system when needed.

Develop learners' ability to close both the customer loop and the organizational learning loop. Explore individual follow-up or service recovery, systemic improvement, clear ownership, escalation, action tracking, communication, follow-through, and determining whether the action taken actually improved the customer experience. Reinforce that VoC is continuous: action creates new evidence that feeds the next cycle of listening and learning.

AI for Product Metrics

AI for Product Metrics is a 2–4 hour Specialized Credential for professionals who want to develop their ability to apply artificial intelligence tools to identify, analyze, and act on product metrics. AI can help teams surface relevant metrics faster, detect patterns in existing data, and generate recommendations. But measurement decisions that are driven by AI without critical human oversight can produce metrics that optimize for the wrong things or mask the limitations of the underlying data. This credential builds the practical capability to use AI to enhance measurement practice while maintaining the judgment needed to act on data responsibly.

1.1 AI-Assisted Metrics Review

Many product teams inherit metric sets designed for different questions or product lifecycle stages. AI can accelerate the review of these metrics by surfacing relevance gaps, coverage issues, and proxy measures.

Develop learners' ability to use AI analysis as a diagnostic lens on existing measurement practices. Position AI as a thinking partner that can challenge an inherited metric set, not only summarise it.

2.1 AI-Assisted Metric Proposals

AI tools can generate metric suggestions quickly, but suggestions vary widely in quality. Some are well-aligned to outcomes, others are proxies or vanity measures. A proxy that a team is measured on will eventually be optimized at the expense of the outcome it stood for.

Develop learners' ability to treat AI-generated metric proposals as raw material, not finished recommendations, by testing each against a stated business or product goal before adopting it. Explore the difference between outcome, proxy, and vanity measures, and the behavior a metric starts to drive once a team is measured on it.

3.1 AI-Informed Product Decisions

AI tools can identify patterns and flag anomalies in metric data much faster than manual analysis, but the decision itself, what the evidence means and what action is warranted, remains a human responsibility.

Equip learners to complete the loop from AI-generated analysis to an accountable human decision. Explore how AI analysis can sharpen understanding of customer behavior, what it can and cannot establish about cause, and how recording the metrics and reasoning behind a decision lets it be revisited once the outcome is known.

4.1 AI-Assisted Metrics Reporting Quality

AI-generated reports and dashboards can appear more rigorous than they are, carrying the look of analytical authority even when the underlying data or metrics are flawed.

Build learners' ability to be a responsible final check before AI-informed measurement reaches decision-makers. Explore how chart choice, aggregation, and framing can overstate what the data supports, how bias enters through the data that happened to be available, and why measurement should run through the entire product or service lifecycle. Explore data provenance, definitions, missingness, representativeness, privacy, hallucination, model or analysis bias, and the level of human review appropriate to the consequence of the decision.

Product Discovery and Experimentation

Product Discovery and Experimentation is a 2–4 hour Specialized Credential for professionals who want to develop their ability to identify and test the riskiest assumptions in a product before committing to full development. Moving from intuition-based product decisions to evidence-based ones requires a disciplined approach to surfacing uncertainty, designing meaningful tests, and interpreting results with intellectual honesty. This credential builds the practical capabilities needed to make discovery a continuous, embedded practice rather than a front-loaded phase.

1.1 Identifying and Prioritizing Product Assumptions

Product decisions rely on assumptions, but not all assumptions create equal risk. Discovery effort is more useful when it focuses first on uncertainties that could most damage the product.

Develop learners' ability to identify and prioritize product assumptions by uncertainty and consequence. Introduce major product risks such as value, usability, feasibility, and business viability. Reinforce the need to review assumptions at both the whole product and the feature level.

2.1 Assumption Testing Approaches

Different assumptions require different tests. Useful testing balances the risk being examined with the cost and speed of learning, whether the scope is a feature or a whole product.

Develop learners' ability to match testing approaches with assumption type, scope, cost, and learning speed. Help them understand that you rarely test everything the same way, for example high-risk assumptions need rigorous testing, lower-risk ones can use lighter approaches. Introduce a variety of testing approaches such as quick validation (customer interviews, surveys), prototyping (build a mockup to test), MVP testing (build minimal version and test with real users), pilot programs (limited rollout), A/B testing, beta testing, and phased rollout.

3.1 Designing Credible Experiments

Poorly designed experiments create ambiguous results and false confidence. Credible experiments make the hypothesis, evidence threshold, and decision implications clear before data is collected.

Develop learners' ability to design product experiments that create credible evidence for a decision. Explore clear hypotheses, representative participants or data, test method, evidence thresholds, guardrails, and what different results would mean before the test begins.

4.1 Turning Evidence into Decisions

Discovery closes when teams interpret evidence honestly and decide what to do next.

Develop learners' ability to interpret evidence honestly, update confidence in key assumptions, identify remaining uncertainty, and make a clear next decision. Use preserve, pivot, pause, or investigate further as practical decision options rather than treating discovery as a pass/fail gate.

Measuring Product Value

Measuring Product Value is a 2–4 hour Specialized Credential for professionals who want to develop their ability to define, track, and communicate the outcomes a product is designed to deliver. Output metrics like features shipped and velocity tell organizations what was built, not whether it mattered. This credential equips practitioners to shift from measuring activity to measuring impact, selecting indicators that reflect genuine customer and business value, tracing that value back to strategic outcomes, and using a mindset of continuous learning rather than treating measurement as a report card.

1.1 Defining Product Value and Outcomes

Teams can deliver many outputs without improving customer or business outcomes. Measuring only what was built can create false confidence about product value.

Build learners' ability to define the customer and business outcomes a product is intended to create before selecting measures. Distinguish outputs, outcomes, behaviors, and metrics, and reinforce that metrics are evidence of progress rather than goals in themselves.

2.1 Selecting Product Metrics

Different metrics reveal different things about product performance. Weak metric choices can create the appearance of rigor without useful decision insight.

Develop learners' ability to assess whether product metrics reflect genuine customer and business value. Introduce types of metrics such as leading and lagging signals, customer behavior, business measures, guardrails, proxies, vanity metrics, and the idea of a North Star metric.

3.1 Adapting Metrics Across Context

The metrics that matter most change as a product evolves and as business context shifts. Learning to adapt measurement to context prevents measuring the wrong things and missing what actually matters.

Build learners' understanding that metric selection depends on context. Introduce how different stages or situations require different measurement focus. For example early stage product metrics focus on adoption and engagement (proof of product–market fit), and market disruption requires measuring defensibility (switching costs, network effects). Good product metrics measure what matters most given where you are and what you're trying to prove.

4.1 Using Evidence to Decide and Learn

Metrics create value when they support ongoing learning and product decisions rather than acting as a periodic report card.

Build learners' ability to evaluate product evidence as part of continuous learning. Explore trends and segments, confidence and uncertainty, causal caution, and how evidence informs decisions such as iterate, scale, investigate, reposition, or stop.

Diagnosing Learning & Performance Needs

Diagnosing Learning & Performance Needs is a 2–4 hour Specialized Credential for professionals who want to move beyond taking training requests at face value and determine what is actually needed. Learners deepen their ability to investigate performance problems, distinguish learning needs from other performance barriers, gather and synthesize evidence, define meaningful success criteria, and communicate evidence-based recommendations to stakeholders. The credential builds a consultative mindset that helps practitioners recommend the right response, even when it differs from the training solution originally requested.

1.1 Diagnosing Performance Problems

Training is often requested before the cause of a performance problem is understood. Gaps may result from missing knowledge or skill, but they may also reflect unclear expectations, inadequate tools or resources, workflow constraints, incentives, environmental conditions, or other factors that training cannot resolve.

Develop learners' ability to investigate a performance problem before recommending a solution. Get learners to distinguish knowledge and skill gaps from other performance barriers, test assumptions about what is causing the problem, and use evidence to determine whether training is part of the appropriate response. Reinforce a consultative mindset in which learners question and clarify a training request rather than simply accept it by exploring root causes.

2.1 Evidence–Based Learning Needs Analysis

Once learning is identified as part of the response, its focus should be based on verified needs rather than assumptions. Learners, managers, subject matter experts, performance data, and other stakeholders may provide different or even conflicting perspectives on what is needed. AI can help organize information, identify patterns, and synthesize large amounts of input, but the quality of the analysis still depends on the quality of the evidence, appropriate use of data, and human interpretation.

Develop learners' ability to gather, compare, and synthesize evidence from relevant sources to define and prioritize learning needs. Get learners to distinguish stated wants from demonstrated needs, reconcile differing stakeholder perspectives, identify gaps between current and desired performance, and recognize where additional evidence is needed. Include appropriate uses and limitations of AI in needs analysis, including bias, privacy, incomplete context, and overconfidence in generated conclusions.

3.1 Defining Learning and Performance Success

Clear success criteria connects the original performance need to what learning should change. Without them, designers may optimize for course completion, participation, or learner satisfaction without knowing whether the intended capability or workplace performance improved.

Develop learners' ability to translate a diagnosed need into measurable success acceptance criteria before design begins, rather than treating measurement as an afterthought once the learning experience is already built. Learners should be able to take a diagnosed gap or need and define what success would actually look like. Success acceptance criteria clearly connects to that original need and its intended outcome so design decisions can be made against a concrete target from the start.

4.1 Communicating Diagnostic Recommendations

Diagnostic findings may challenge the original request, stakeholder assumptions, or preferred solution. Analysis only creates value when practitioners can communicate what they found, explain the implications, and help stakeholders make an informed decision about the appropriate response.

Develop learners' ability to communicate diagnostic conclusions with clarity and credibility, particularly when the recommendation differs from what stakeholders initially requested or expected. Get learners to connect recommendations to evidence, explain what training can and cannot address, surface trade-offs or uncertainties, and adapt the communication to the audience without overstating the certainty of the diagnosis.

Measuring Change

Measuring Change is a 2–4 hour Specialized Credential for practitioners who want to define, track, and communicate the outcomes and value of organizational change.

1.1 Measure What Matters

Change measurement often defaults to training counts, communications, events, or milestones. These activities do not show whether people are adopting new ways of working or if the intended outcomes are being realized.

Build learners' understanding of how what is measured is what becomes the focus of the change initiative. Cover the difference between measuring activity vs measuring evidence of change outcomes. For example, reporting that 500 people attended training or that all planned milestones were hit says something happened, but nothing about whether the change happened.

2.1 Defining Meaningful Change Outcomes

Change success includes more than delivery completion. It can involve behavior change, business value, human impact, and preservation of the organization's capacity to adapt again.

Develop learners' ability to define meaningful human and business outcomes before selecting measures. For example, a change can hit every delivery date and still fail if the intended behavior never takes root, if it damages trust or morale in ways that outlast the project, or if it leaves the organization more exhausted and resistant to the next change than before. Introduce success measures that go beyond delivery completion such as whether people are actually behaving differently, whether real business value showed up, or whether the organization is still capable of adapting again afterward.

3.1 Leading and Lagging Change Indicators

Leading indicators provide early signals during change, while lagging indicators show sustained behavior or value after implementation. Using both helps practitioners adapt before problems become expensive.

Develop learners' ability to create a practical measurement approach that combines early and late signals with outcome evidence. A metric like meeting attendance or early usage rates can flag trouble, while there's still room to adjust. Whereas something like sustained productivity gains only shows up long after the moment to course-correct cheaply has passed.

4.1 Using Evidence to Adapt the Change Approach

Measurement creates value only when it influences decisions. Practitioners need to interpret evidence and use it to adjust the change approach rather than collect data for reporting alone.

Develop learners' ability to use evidence as an active learning and adaptation tool for helping change be successful. For example, a dashboard full of change adoption metrics is worthless if it just gets reported upward and filed away without changing what the practitioner does next. Learners should be able to look at what the evidence is actually showing, whether that's an adoption dip in one team or a metric that never moved, and identify the specific adjustment to the change approach that the data actually supports.

Decision-Making Under Uncertainty

Decision-Making Under Uncertainty is a 2–4 hour Specialized Credential for professionals who want to develop their ability to make sound decisions when information is incomplete, conditions are changing, and outcomes cannot be predicted with confidence.

1.1 Decision-Making Under Uncertainty

In some decisions uncertainty is deep enough that no amount of analysis will resolve it — the only way forward is to choose a path, act, learn from what happens, and be ready to change course. This goes beyond the Core's treatment of uncertainty as one factor among many.

Build learners' understanding of decision-making under deep uncertainty as an ongoing cycle of committing, testing, learning, and adjusting.

2.1 Critical Assumptions and Weak Signals

When evidence is incomplete, teams need to know which assumptions matter most and which signals would show that conditions are changing.

Develop learners' ability to focus attention on assumptions and signals that could materially change a decision.

3.1 Adaptive Decision Approaches

Uncertain decisions may benefit from staged commitments, experiments, checkpoints, or triggers that preserve future choice. A single irreversible commitment may be too rigid for changing conditions.

Develop learners' ability to design decision approaches that enable action while preserving learning and adaptability.

4.1 Persist, Pivot, or Stop Decisions

Uncertainty continues after a decision is made. The hardest part is often not spotting that a change is needed, but having the willingness and commitment to act on it — persisting, pivoting, or stopping — despite sunk cost, ego, or pressure to stay the course.

Develop learners' ability and resolve to change a decision when the evidence calls for it, not only to recognize that it should change.

SPECIAL THANKS

ICA would like to give special thanks to the contributors:

Kerri Sutey · Paulo Dias · Christina Hartikainen · Tricia
Broderick · Thiago Brant · Evan Leybourn