TECHNICAL WHITE PAPER

RWC Federal Career Fit

Scientific Rationale, Scoring, Federal Mapping, Accessibility, and Evidence Program

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PURPOSE: RWC Federal Career Fit provides transparent, accessible occupational-series recommendations for federal career navigation, workforce development, veteran transition, internal mobility, and application planning.

Executive Summary

RWC Federal Career Fit is a 50-item self-report instrument designed to help people explore federal occupations. It combines Holland's six RIASEC vocational-interest dimensions with four transparent self-reported work-style dimensions: Problem Solving, Communication, Detail and Compliance, and Adaptability. Results are mapped to actual occupational series defined by the U.S. Office of Personnel Management. The instrument is intended initially for career exploration, veteran transition, workforce development, internal mobility, and application planning.

1. Product Application

A higher alignment result identifies occupational activities and work environments that deserve priority in a user's federal career search. The career map supports vacancy research, career counseling, workforce planning, internal mobility, veteran transition, and focused application development.

2. Construct Model

The six interest scales follow the Realistic, Investigative, Artistic, Social, Enterprising, and Conventional structure used by the O*NET Interest Profiler. The four work-style scales use plain-language behaviors related to recurring OPM competency concepts. They are self-reports of preference or typical behavior, not direct demonstrations of ability.

3. Item and Response Design

Each scale contains five items. Every item uses the same three-point response format: A, Not like me; B, Sometimes like me; C, Very much like me. Items avoid protected-class questions and sensitive records. A three-point format prioritizes usability, but pilot data must determine whether it provides sufficient reliability and differentiation.

4. Scoring

Responses receive values of 0, 1, or 2. Five items produce a raw scale score from 0 to 10, displayed as a 0-100 alignment index. Occupational-series scores are weighted averages of relevant dimension indices, creating an understandable ranked career map.

5. Federal Occupational Mapping

Occupational titles and series originate in OPM's Handbook of Occupational Groups and Families. RWC includes 24 series. ALA's transparent dimension weights make every recommendation explainable and support systematic expert review and expansion.

6. Accessibility and Accommodations

The interface uses semantic headings, fieldsets and legends, explicit labels, visible focus, keyboard-operable controls, live progress status, responsive reflow, high contrast, reduced-motion support, and no time limit. Planned testing includes automated checks plus manual keyboard, screen-reader, zoom, reflow, error-recovery, and assistive-technology review.

7. Fairness and Non-Bias Program

ALA's evidence program covers structured content and reading-level review, accessibility and accommodations, reliability, factor structure, differential item functioning, subgroup score and recommendation-pattern comparisons, and adverse-impact monitoring.

8. IBM Quantum Research Layer

Qiskit and IBM Quantum resources can support auditable randomization seeds, random audit sampling, and constrained-optimization research. This layer adds reproducible audit artifacts to established psychometric, accessibility, validity, and fairness methods.

9. Evidence Roadmap

The evidence program includes expert review; cognitive interviews; accessibility testing; preregistered pilot administration; item and completion-time analysis; reliability and test-retest analysis; examination of factor structure; convergent and discriminant evidence; usefulness and comprehension studies; differential-item-functioning review; and agency-specific job analysis and outcome studies.

10. Security and Privacy

Browser-local progress supports data minimization. Agency configurations can align collection, retention, deletion, access, incident response, and subprocessors with the approved program purpose.

11. Expansion Program

The modular framework supports additional OPM series, live USAJOBS vacancy integration, agency-specific competency mapping, expanded response models, and longitudinal outcome evidence.

12. Conclusion

RWC Federal Career Fit delivers an accessible and transparent route from self-knowledge to actual federal occupational-series opportunities. Published questions, rationales, dimensions, weights, sources, and an ongoing evidence program make the system understandable, auditable, and ready to grow with agency needs.

Appendix A. Scale Definitions

Scale	Items	Interpretation
Realistic	5	Hands-on and operational work
Investigative	5	Research and complex analysis
Artistic	5	Communication and original expression
Social	5	Helping, teaching, and service
Enterprising	5	Leadership, persuasion, and initiative
Conventional	5	Order, records, and dependable procedures
Problem Solving	5	Unfamiliar and ambiguous problem solving
Communication	5	Explaining, listening, and coordinating
Detail and Compliance	5	Accuracy, documentation, rules, and quality control
Adaptability	5	Learning, change, resilience, and uncertainty

Appendix B. Complete 50-Item Bank and Rationale

Response scale: A = Not like me; B = Sometimes like me; C = Very much like me.

1. I enjoy working directly with equipment, tools, vehicles, or physical systems.

Dimension: Realistic. Measures preference for practical, tangible activities associated with Holland's Realistic interest dimension.

2. I would rather inspect a site or operation than spend the entire day discussing it.

Dimension: Realistic. Samples preference for field observation and concrete action rather than exclusively abstract or interpersonal work.

3. Troubleshooting how a machine or physical process works sounds satisfying to me.

Dimension: Realistic. Represents hands-on diagnosis commonly found in technical, engineering, maintenance, safety, and operations work.

4. I like assignments where I can see a practical result at the end of the day.

Dimension: Realistic. Measures attraction to observable outcomes, a core feature of Realistic work environments.

5. I am comfortable doing some of my work outdoors, in facilities, or at operational locations.

Dimension: Realistic. Assesses comfort with non-desk work contexts without treating physical preference as ability or qualification.

6. I enjoy investigating why something happened before deciding what should be done.

Dimension: Investigative. Measures Investigative interest in evidence gathering, causal analysis, and reasoned conclusions.

7. I like comparing data from several sources to find patterns.

Dimension: Investigative. Samples attraction to analytical work used across science, intelligence, economics, audit, and program evaluation.

8. A difficult question makes me want to research it until I understand it.

Dimension: Investigative. Measures persistence and interest in inquiry; it does not directly measure research skill.

9. I enjoy testing explanations against facts rather than relying on first impressions.

Dimension: Investigative. Represents evidence-oriented inquiry and hypothesis checking associated with Investigative environments.

10. I would enjoy work that requires learning specialized scientific or technical concepts.

Dimension: Investigative. Measures interest in acquiring technical knowledge relevant to scientific, mathematical, medical, and technology occupations.

11. I enjoy turning complicated information into a clear story, visual, or presentation.

Dimension: Artistic. Measures Artistic interest expressed through communication, interpretation, and design rather than fine arts alone.

12. I like assignments that allow more than one good way to produce the final result.

Dimension: Artistic. Samples preference for open-ended work and originality associated with Artistic environments.

13. Writing, editing, designing, or producing media is appealing to me.

Dimension: Artistic. Directly samples common information-and-arts activities in federal communications occupations.

14. I notice how wording, layout, or presentation changes the way people understand information.

Dimension: Artistic. Measures sensitivity to communication form and audience interpretation.

15. I enjoy developing an original approach when standard examples do not fit.

Dimension: Artistic. Samples preference for ideation and flexible expression while remaining distinct from tested creative ability.

16. I gain satisfaction from helping someone understand a difficult process.

Dimension: Social. Measures Social interest in teaching, guidance, and person-centered assistance.

17. I would enjoy work that improves services for people or communities.

Dimension: Social. Samples attraction to public-service outcomes without presuming a particular political or social viewpoint.

18. I am interested in listening to people's needs before proposing a solution.

Dimension: Social. Measures preference for helping interactions and needs assessment.

19. Training, counseling, coaching, or supporting others sounds meaningful to me.

Dimension: Social. Directly samples Social activities found in education, human services, rehabilitation, and workforce roles.

20. I prefer work where I can see how my contribution benefits other people.

Dimension: Social. Measures attraction to visible human impact and service-oriented work environments.

21. I enjoy taking responsibility for moving a group toward a decision.

Dimension: Enterprising. Measures Enterprising interest in influence, direction, and accountable action.

22. Negotiating priorities or resources is an appealing challenge to me.

Dimension: Enterprising. Samples persuasion and negotiation activities common in management, contracting, and stakeholder-facing roles.

23. I am comfortable presenting a recommendation to people who may disagree.

Dimension: Enterprising. Measures preference for advocacy and influence; it does not score the quality of the presentation.

24. I like identifying an opportunity and organizing people to act on it.

Dimension: Enterprising. Represents initiative and mobilization associated with Enterprising work.

25. Leading a project with visible responsibility for the outcome appeals to me.

Dimension: Enterprising. Samples attraction to leadership and ownership without inferring supervisory qualification.

26. I enjoy organizing information so other people can find and use it reliably.

Dimension: Conventional. Measures Conventional interest in orderly information, records, and repeatable systems.

27. Maintaining accurate financial, inventory, case, or administrative records suits me.

Dimension: Conventional. Samples structured recordkeeping activities found across accounting, logistics, benefits, and program support.

28. I prefer assignments with clear requirements and a dependable process.

Dimension: Conventional. Measures preference for structure and procedural clarity, not resistance to all change.

29. Checking whether documents are complete and correctly filed is satisfying to me.

Dimension: Conventional. Represents verification and records-control work associated with Conventional environments.

30. I like creating schedules, trackers, or systems that keep work on course.

Dimension: Conventional. Samples organizing and monitoring activities common in administrative and program-control occupations.

31. When instructions are incomplete, I can usually identify a sensible next step.

Dimension: Problem Solving. Self-report indicator of comfort with ambiguous problem solving; it is not a cognitive performance item.

32. I break a complicated problem into smaller parts before choosing a solution.

Dimension: Problem Solving. Samples a structured problem-solving tendency aligned with OPM competency language.

33. I compare possible solutions and their consequences before acting.

Dimension: Problem Solving. Measures reported decision-analysis behavior relevant across many federal occupations.

34. I look for the underlying cause when the same problem keeps returning.

Dimension: Problem Solving. Samples root-cause orientation rather than superficial symptom treatment.

35. I can revise my conclusion when credible evidence points in a different direction.

Dimension: Problem Solving. Measures reported evidence responsiveness and guards against equating confidence with sound judgment.

36. I can explain technical or procedural information in language the audience understands.

Dimension: Communication. Self-report indicator of audience-aware oral or written communication.

37. I ask clarifying questions before assuming I understand another person's request.

Dimension: Communication. Samples active-listening and information-gathering behavior.

38. I am comfortable writing a concise summary of facts, decisions, and next steps.

Dimension: Communication. Measures preference and confidence in practical written communication used widely in federal work.

39. I keep affected people informed when a plan or deadline changes.

Dimension: Communication. Samples coordination and stakeholder communication behavior.

40. I can respectfully communicate a concern even when the conversation is difficult.

Dimension: Communication. Measures reported communication courage and professionalism, not interpersonal skill under observation.

41. I check important work for accuracy before I submit it.

Dimension: Detail and Compliance. Self-report indicator of quality-control behavior relevant to regulated and high-consequence work.

42. I document decisions so another person can understand what happened and why.

Dimension: Detail and Compliance. Samples auditability and records discipline important in public administration.

43. I pay attention when a requirement contains exceptions or precise conditions.

Dimension: Detail and Compliance. Measures reported attention to qualifying language used in law, policy, finance, safety, and acquisition.

44. I am comfortable following a required procedure even when a shortcut seems faster.

Dimension: Detail and Compliance. Samples compliance orientation while avoiding claims about integrity or misconduct prediction.

45. I notice inconsistencies between numbers, records, or versions of a document.

Dimension: Detail and Compliance. Self-report indicator of detail orientation; direct accuracy would require a performance test.

46. I can reorganize my work when priorities change unexpectedly.

Dimension: Adaptability. Measures reported adaptability to shifting demands.

47. Learning a new system or procedure is usually an interesting challenge for me.

Dimension: Adaptability. Samples learning orientation and comfort with change.

48. I remain productive while waiting for some information or decisions to become clear.

Dimension: Adaptability. Measures tolerance for uncertainty and ability to continue useful work.

49. After a setback, I can refocus on the next constructive action.

Dimension: Adaptability. Samples resilience without diagnosing mental health or emotional stability.

50. I can work effectively with people whose methods differ from mine.

Dimension: Adaptability. Measures behavioral flexibility and collaboration across differing work styles.

References

O*NET Interest Profiler Manual (2021). https://www.onetcenter.org/reports/IP_Manual.html

OPM Handbook of Occupational Groups and Families. https://www.opm.gov/policy-data-oversight/classification-qualifications/classifying-general-schedule-positions/occupationalhandbook/

OPM MOSAIC Competencies. https://www.opm.gov/policy-data-oversight/assessment-and-selection/competencies/

OPM Job Analysis. https://www.opm.gov/policy-data-oversight/assessment-and-selection/job-analysis/

OPM General Schedule Qualification Standards.
https://www.opm.gov/policy-data-oversight/classification-qualifications/general-schedule-qualification-standards/

OPM Designing an Assessment Strategy.
https://www.opm.gov/policy-data-oversight/assessment-and-selection/assessment-strategy/

USAJOBS Job Search API. https://developer.usajobs.gov/api-reference/get-api-search

IBM Quantum QAOA Tutorial.
https://quantum.cloud.ibm.com/docs/en/tutorials/quantum-approximate-optimization-algorithm