Social Security Administration

Occupational Information System
Fiscal Year 2011
Research and Development Plan
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A Message from the Associate Commissioner

We are developing an occupation information system (OIS) that will meet the requirements of the Social Security Administration’s disability programs. I am pleased to share with you the OIS Research and Development Plan that provides information about the research and development activities we plan to carry out. We will update this plan every fiscal year in order to reflect our progress and keep you informed of any modifications based on research findings or changes due to available funding and staffing.

For information on the OIS project, please visit us online at http://www.socialsecurity.gov/disabilityresearch/projects.htm.

Thank you for your interest and support of our efforts.

Richard Balkus
Associate Commissioner
for Program Development and Research
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The Social Security Administration’s (SSA) Occupational Information System (OIS) initiative involves several phases, of which the first is a Research and Development (R&D) phase. The scope of the R&D phase is to develop, test, and implement the requirements, content, and methods needed to create, refine, and maintain an OIS tailored for SSA’s disability programs. In subsequent phases, the agency will integrate the use of the new data into the agency’s disability process and will conduct ongoing research and data collection activities to ensure that the OIS information remains relevant. OIS R&D activities and results may inform the agency’s decisions regarding prospective changes in policy if the agency deems them appropriate, but the R&D phase itself will not involve any changes to policy or procedures.

These are the project phases:

Research and Development

Disability Process and Systems Integration

Ongoing Maintenance and Research

This document provides a window into the activities planned for the R&D phase of SSA’s OIS development, including the process SSA will use to conduct R&D activities. Implementation of that process will, in turn, further inform the development of this R&D plan. As such, the R&D plan is a dynamic document that SSA will refine as the R&D phase of the project progresses. SSA will issue annual updates to this plan.

The plan was developed by SSA staff with expertise in SSA disability programs and policy analysis, program evaluation and research design, industrial/organizational psychology, and psychometrics. SSA staff also obtained key input from other experts within SSA and outside of the agency.
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I. OIS Objectives, Key Criteria, and Assumptions

A. Objectives

SSA’s primary objective for the OIS project is to develop a new source of information regarding work performed in the national economy that will:

1. Replace the *Dictionary of Occupational Titles* (DOT)\(^1\) as SSA’s principal source of occupational information. Access to this updated occupational information will enable SSA to meet its strategic goal to improve the speed and quality of its disability determinations and decisions.\(^2\)

2. Meet each of SSA’s legal, program, and data requirements.\(^3\)
   a. Identify occupations that exist in the U.S. in significant numbers.
   b. Describe requirements and conditions of work in a manner that is clear and specific enough to be applied effectively, efficiently, and consistently by SSA adjudicators. At step four of the sequential evaluation process, we compare occupational information with a claimant’s physical and mental residual functional capacity (RFC) to determine if he or she can perform past work. At step five, we compare occupational information with a claimant’s RFC and vocational factors (age, education, and past work experience) to determine if he or she has the ability to adjust to other work which exists in significant numbers in the national economy.\(^4\)
   c. Provide a sound scientific and legal basis for SSA’s OIS.

3. Establish a coherent, standardized structure for classifying work and for providing information on work requirements.

4. Create an OIS that is responsive to changes in occupations over time, and that provides a flexible platform for SSA’s occupational information enabling the agency to update policies and process as needed.

5. Allow SSA users to effectively associate the assessment of claimants’ residual functional capacity and vocational profiles with work requirements.

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\(^3\) SSA has articulated these needs and the Occupational Information Development Advisory Panel confirmed them in its September 2009 recommendations to the Commissioner Astrue. See [http://www.ssa.gov/oidap/Documents/FinalReportRecommendations.pdf](http://www.ssa.gov/oidap/Documents/FinalReportRecommendations.pdf)

\(^4\) See Appendix I.
B. Key Criteria

To fulfill the objectives identified above, development of SSA’s OIS must meet the following criteria:

1. Legal supportability – The new OIS must ensure SSA’s ability to meet existing statutory and regulatory requirements for disability adjudication and provide a firm basis for the agency’s program rules and procedures regarding the use of an OIS.

2. Scientific soundness – SSA must develop the new OIS according to Federal scientific guidelines and generally accepted scientific standards.

3. Operational feasibility – SSA must be able to apply the new OIS using its existing organizational and personnel structures and in a manner that maintains the ability of SSA operational components to meet agency performance standards.

4. Budgetary feasibility – Development and maintenance of the new OIS conforms to the same Federal budgetary processes, scrutiny, and approval that are required of other SSA initiatives and is funded within parameters imposed by those processes.
C. Assumptions

In attempting to meet the objectives and criteria listed above, SSA is guided by a set of assumptions or constraints regarding the effect of the OIS and its operational environment. These assumptions include the following:

1. SSA evaluates each OIS research activity according to the key criteria identified above; the evaluation results inform subsequent development of the OIS.

2. SSA will continue to adjudicate disability claims within current law and regulations. We will integrate valid data from the new OIS into SSA’s current disability process, provided that disability adjudicators can use the data effectively. The OIS will also provide the basis for possible policy and process changes SSA may deem appropriate in light of the new occupational information collected.
II. OIS Organizational Components and Stakeholders

A key aspect of all OIS R&D project activities cited in this plan involves explicit recognition of the organizational components and stakeholders responsible for, affected by, or interested in OIS development efforts, which include:

A. Project Components with Direct, Ongoing Responsibility for OIS Project Activities

1. SSA’s Office of Program Development and Research, Office of Vocational Resources Development (OVRD) – This SSA component, which has primary responsibility for OIS design and development, is comprised of staff with expertise in SSA disability adjudication process and policy, program evaluation, research design, industrial-organizational psychology, and psychometrics. OVRD is responsible for planning, initiating, overseeing, conducting, and reporting on all OIS research and design activities.

2. SSA senior management – Senior Executives within SSA.

3. SSA OIS Development Workgroup (Workgroup) – A consultative forum composed of staff and managers from a variety of SSA organizational components that have a direct interest in and expertise related to the use of occupational information in the disability adjudication process.

4. Occupational Information Development Advisory Panel (OIDAP or Panel) – A discretionary Panel, established under the Federal Advisory Committee Act of 1972, which is comprised of no more than 14 external (non-SSA) members with expertise in areas related to OIS development for SSA disability programs. The Panel provides independent advice and recommendations to the Commissioner of Social Security on SSA’s plans and activities to replace the DOT. While the Panel’s role is solely advisory, the Panel duties include, but are not limited to attending meetings, reviewing relevant materials, and participating in presentations, discussions, and deliberations to prepare and deliver recommendations to the Commissioner. The Panel’s mission is described in its charter.5

B. Stakeholders

1. Other SSA organizational components – Includes components with general advisory or approval roles such as the Office of the General Counsel, Office of the Chief Actuary, Office of Acquisition and Grants, Office of Systems, Office of Chief Information Officer, and Office of Inspector General (OIG).

2. SSA disability adjudication staff and organizations representing these professionals – Includes all SSA and Disability Determination Services (DDS) employees who have a direct or indirect responsibility for adjudicating disability claims.

3. Non-SSA professionals involved in disability adjudication – Includes individuals and organizations who are not employed by SSA or DDSs but who provide professional services to SSA or claimants pertaining to disability adjudication (e.g., vocational experts, claimant representatives).

4. Oversight and advisory organizations – Includes any internal or external body that has legislative and regulatory responsibility for examining and monitoring SSA’s program, policy, and budgetary activities, such as Congress, Office of Management and Budget, OIG, Government Accountability Office, and the Social Security Advisory Board.

5. Advocacy groups – Includes a variety of organizations representing a wide array of constituents, including representatives and advocates of disability applicants.

6. Other Federal agencies – Includes Federal entities that have knowledge and experience in occupational classification development, work analysis, disability adjudication, vocational rehabilitation, conducting national sampling and data collection activities, or other areas relevant to SSA’s development of an OIS (e.g., Department of Labor, Department of Defense, Census Bureau, Office of Personnel Management).

7. Claimants for SSA disability benefits – Includes anyone who applies for SSA disability benefits and is, therefore, potentially affected by the processes and resources (e.g., occupational information) SSA applies in the adjudication process.

8. General public – Includes any citizen with an interest in learning about and providing input on the OIS project.
III. Business Process for Development of the OIS

SSA has implemented a business process by which it can support and conduct OIS R&D activities. The OIS business process consists of four study or research activity development phases as well as guidelines for consultation with project components and for sharing information with and obtaining input from stakeholders.

A. Study/Research Activity Development Phases

Phase I: Preliminary Planning and Information Gathering - OVRD formulates in Phase I a clear, realistic plan based on a review of available information and on guidance and advice provided by internal and external experts. Phase I of an activity or study must convey how the activity or study is related to the research design activities articulated in Sections IV and VI. The Phase I document represents a conceptual plan for an activity or study. It provides a basis for the activity or study design that OVRD develops in Phase II. Phase I is completed when OVRD has sought and considered input through relevant consultation as needed (see Section III.B.).

Phase II: Design - In this Phase, OVRD builds upon the information and plans developed in Phase I and develops a more detailed framework for conducting an activity or study. The Phase II document also identifies the applicable OIS standards (see Section IV, E-G). The Phase II document represents the study or research activity design. Phase II is completed when OVRD has sought and considered input through relevant consultation as needed (see Section III.B.).

Phase III: Data Gathering and Analysis - Phase III involves implementing the design plan described in a Phase II document. The major milestones of this phase are the completion of each of the methodological and operational requirements (e.g., sampling, questionnaire development, and data collection) identified in the study or activity design plan as well as the analysis of the resulting data.

Phase IV: Product Preparation, Review, and Approval - In this phase, OVRD prepares the product specified in the Phase II document (study or research activity design), disseminates it to project components for comments, ensures that relevant comments are considered and addressed, and obtains approval from SSA management for the final product.

When SSA intends to produce a published paper regarding the outcomes of an OIS study or research activity, OVRD will follow the agency’s established peer-review process for research publications.7

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6 The term “research activity” refers to activities identified in the OIS Research and Development Plan, Section IV.
7 See Appendix II for SSA memorandum outlining peer-review process for paper publication.
B. Consultation and Information Sharing

In carrying out the study/research activity development phases (listed in section III.A.), OVRD shares information and consults with project components on a regular basis, seeking review, comments, and advice to support OIS R&D activities. In particular, OVRD pursues each form of routine consultation with relevant project components during each of the study and research activity development phases. In addition, the need for non-routine consultation with project components or stakeholders may arise at any point during the research activity/study development phases.

1. Routine information sharing and consultation involves the following:
   a. Early Phase Consultation: At the start of each project development phase, OVRD informs the Workgroup and Panel members of the plans for and status of the project activity. OVRD also obtains verbal and informal written input from relevant source(s) on: (1) issues or problems that may arise; (2) names of individuals or organizations that might have worthwhile information; (3) potential sources of information or data to be examined; (4) legal, operational, scientific, or methodological issues to be considered; and, (5) alternatives for achieving the goals of the study or activity.
   b. Interim Phase Consultation: Mid-way through a phase, OVRD staff shares interim results on OIS project activities with the Workgroup and Panel members.
   c. End of Phase Consultation: Near the end of each process phase, OVRD distributes draft products to the Workgroup and Panel members and requests specific comments.

2. Non-routine information sharing and consultation involves the following:
   a. Targeted Consultation: In addition to the consultation at each of the process phases specified above, OVRD may consult with specific members of the Workgroup, the Panel, or other internal or external organizations or individuals who possess relevant expertise or experience whenever OVRD finds that the development or implementation of an activity or study requires it.
   b. Information Sharing with Stakeholders: OVRD may provide information and solicit input from stakeholders through various means (e.g., posting of key plans and reports to OVRD’s OIS project website).
IV. OIS Research and Design Activities

This section outlines the primary studies and research activities that SSA will conduct to design the components and processes for a new OIS.

The organization of this section reflects each of the major project activities described in terms of the following elements numbered as follows:

1. Primary Objective
2. Key Questions
3. General Methodological Approach
4. Primary Products/Outcomes and Milestones Reflecting Estimated Fiscal Year (FY) Completion Date
5. Contracts Currently Awarded or Completed as of the Date of the Plan

As the project progresses, SSA will develop the activities summarized in this section based on the Phase I and II documents required by the OIS business process (see Section III.A). Results of the investigations, studies, and other research activities described in Section IV will refine the OIS R&D plan, which SSA will update at least once each fiscal year.
A. Baseline Activities: Investigate Existing OISs

1. Primary Objective
   To establish an informed basis for identifying lessons SSA can learn about features, requirements, processes, and options through examination of the development and operation of existing domestic and international OISs.

2. Key Questions
   a. What OISs have U.S. government and other major industrialized nations or international organizations developed?
   b. What are the principal features of the OISs (e.g., their structure, their data elements, data analysis protocols, and the methodology for developing and updating them)? What are the significant common features across systems and what are the significant distinct features?
   c. What resources (e.g., costs, development time, tools, and expertise) were involved in developing these OISs?
   d. For what purpose was the identified OIS developed?

3. General Methodological Approach
   a. Review prior SSA work.\(^8\)
   b. Consult with relevant internal and external experts to identify relevant OISs and selection/assessment criteria.
   c. Select sample of OISs based on identified criteria (judgment sample).
   d. Conduct literature reviews to obtain information on features and methodologies of other OISs.
   e. Conduct semi-structured interviews of officials responsible for development and maintenance of other OISs.
   f. Document and synthesize information obtained from various sources as it pertains to SSA’s study questions and criteria in order to facilitate comparison of OISs.

4. Primary Products/Outcomes and Milestones Reflecting Estimated Fiscal Year (FY) Completion Dates
   a. Evaluation of private-sector DOT-based OIS to determine if it could meet SSA’s OIS requirements. [FY 2010]
   b. Literature review for international OISs. [FY 2010]
   c. Literature review for domestic OISs. [FY 2011]
   d. Interviews for international OISs. [FY 2010]
   e. Interviews for domestic OISs. [FY 2011]
   f. Analysis of results. [FY 2011]
   g. Final report. [FY 2011]

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\(^8\) From 1996 through 2009, SSA investigated alternative occupational resources for use in its disability programs: American Institutes for Research reviewed existing classifications for SSA under contract no. 600-96-25678 (November 1996), and it evaluated O*NET for SSA’s use under contract 600-97-32018, task order no. 0440-97-32258, Modification #3 (November 2000). ICF International conducted an evaluation of private sector dataset for SSA under contract no. SSA-RFQ-08-1549 (June 2009). As a result, SSA concluded that it could not use the data evaluated for its disability programs, nor would modifications be reasonable alternatives given the legal and technical implications involved.
5. Contracts Currently Awarded or Completed as of the Date of the Plan
   Completed: ICF International conducted an evaluation of private-sector DOT-based
datasets for SSA’s possible short-term use under contract no. SSA-RFQ-08-1549, final
report, June 2009.
B. Baseline Activities: Conduct Occupational and Medical-Vocational Claims Review Study

1. Primary Objective
   To identify and record the primary occupational, functional, and vocational characteristics of adult applicants under SSA’s title II Disability Insurance (DI) and title XVI Supplemental Security Income (SSI) programs whose claims were approved or denied at steps four or five of the sequential evaluation process in determinations and decisions made at the initial and hearings levels.

2. Key Questions
   a. What occupations are most commonly cited by disability claimants as work that they have performed in the past?
   b. What occupations are most commonly identified at the initial and hearings levels in step four and five denials as work that the claimant can perform?
   c. What functional limitations of claimants are most commonly identified at the initial and hearings levels?
   d. Which Medical-Vocational rules are most commonly cited at the initial and hearings levels as a basis for allowing or denying benefits?

3. General Methodological Approach
   Using a sample survey approach, SSA will:
   a. Randomly select a nationally representative stratified sample of 5,000 claims processed in FY 2009 consisting of 3,867 initial-level cases and 1,133 hearings-level cases. This sample reflects the proportion of SSA disability cases decided at both decision levels.
   b. Design structured data collection instrument(s) (DCI) and review procedures or protocols for initial- and hearings-level cases corresponding with the specific type of data available at each level.
   c. Perform pilot studies for initial and appellate case reviews to identify possible limitations in the design of the study, evaluate the usefulness of the DCI, and assess the extent to which the case reviewers are accurately and reliably recording data elements from the case files.
   d. Conduct reviews of initial-level and hearings-level cases using SSA program staff with disability adjudication experience.
   e. Develop a quality review process to ensure data accuracy and conduct quality reviews in accordance with that process.
   f. Analyze DCI data to develop relevant descriptive statistics.

4. Primary Products/Outcomes and Milestones Reflecting Estimated Fiscal Year (FY) Completion Dates
   a. Reviews of initial-level cases. [FY 2010]
   b. Reviews of hearings-level cases. [FY 2011]
   c. Analysis of study results. [FY 2011]
   d. Final report including relevant descriptive statistics (e.g., data regarding occupations that are most prevalent in claimants’ vocational histories) to help SSA to target its initial OIS data collection efforts. [FY2012]
5. Contracts Currently Awarded or Completed as of the Date of the Plan
    Lockheed Martin is providing technical support to complete the development of the
    hearing-level DCI, maintain the study database, and provide IT support during data
    collection and analysis under procurement request no. 9151-11-1002, awarded March
    2011.
C. Baseline Activities: Investigation and Benchmarking of Job Analysis Methodologies

1. Primary Objective
   To identify existing job analysis methods, their features, and their potential usefulness for SSA OIS development.

2. Key Questions
   a. What are the major approaches for conducting job analysis?
   b. What are the principal purposes, activities, tools, and strategies used to conduct job analysis?
   c. To what extent do specific job analysis methods appear to meet SSA’s OIS requirements?
   d. What best practices can SSA employ to develop a job analysis methodology and strategy for its OIS purposes?

3. General Methodological Approach
   a. Conduct literature review to identify job analysis approaches and methods identified in academic and other sources.
   b. Conduct semi-structured interviews and focus groups with experts in job analysis from multiple disciplines.
   c. Develop framework and criteria for analyzing the information collected.
   d. Conduct expert review of the job analysis information in accordance with established criteria.

4. Primary Products/Outcomes and Milestones Reflecting Estimated Fiscal Year (FY) Completion Dates
   a. Methodology report. [FY 2011]
   b. Report of literature review results. [FY 2011]
   c. Final report on the development of a job analysis methodology. This report will provide SSA with a broad range of information and criteria on job analysis approaches that SSA can then further develop and build upon to eventually craft a job analysis approach that is most suitable for its OIS purposes. [FY 2011]

5. Contracts Currently Awarded or Completed as of the Date of the Plan
   SSA awarded a Blanket Purchase Agreement to ICF International in September 2010 to identify and analyze various approaches, methods, and best practices for OIS data collection. The contract for these services is contained in Call Order 001, awarded September 2010.
D. Baseline Activities: Investigation and Benchmarking of Business Processes for Recruiting, Training, and Certifying Job Analysts

1. Primary Objective
   To identify existing business processes used to recruit, train, and certify job analysts and their potential usefulness for SSA’s OIS development.

2. Key Questions
   a. What are the major approaches or processes for recruiting, training, and certifying job analysts?
   b. What are the principal purposes, goals, activities, and strategies used to recruit, train, and certify job analysts?
   c. To what extent do specific recruitment, training, and/or certification processes appear to meet SSA’s OIS requirements?
   d. What best practices can SSA employ to develop a job analyst recruitment, training, and certification process for its OIS purposes?

3. General Methodological Approach
   a. Conduct literature reviews to identify relevant recruitment, training, and certification methods identified in academic and other sources.
   b. Conduct semi-structured interviews and focus groups with experts in job analysis recruitment, training, and certification from multiple disciplines.
   c. Develop framework and criteria for analyzing the information collected.
   d. Conduct expert review of the job analysis information in accordance with the established criteria.

4. Primary Products/Outcomes and Milestones Reflecting Estimated Fiscal Year (FY) Completion Dates
   a. Methodology report. [FY 2011]
   b. Candidate tracking database. [FY 2011]
   c. Final report on processes for the recruitment, training, and certification of job analysts; report will provide SSA with a broad range of information and criteria on job analyst recruitment, training, and certification processes that SSA can further develop and build upon to craft a job analyst recruitment, training, and certification process suitable for its OIS purposes. [FY 2011]

5. Contracts Currently Awarded or Completed as of the Date of the Plan
   SSA awarded a Blanket Purchase Agreement to ICF International in September 2010 to identify and analyze various business processes for job analyst recruitment, training, and certification. The contract for these services is contained in Call Order 002, awarded September 2010.
E. Identify SSA’s OIS Standards: Usability

1. Primary Objective
   To identify standards and criteria for assessing the operational usability of the new OIS and to incorporate those standards into OIS R&D activities. Usable OIS data will help SSA adjudicators more quickly and accurately serve the public.

2. Key Questions
   a. How do SSA adjudicators currently use occupational information and what features must a new OIS possess to ensure that adjudicative staff can easily understand and apply new OIS categories, definitions, and measures?
   b. What usability factors and procedures must SSA consider during the R&D phase that would assist subsequent OIS project phases (e.g., before software development)?

3. General Methodological Approach
   a. Consult with the Panel, the Workgroup, the SSA Usability Center (UC), and other relevant experts to identify OIS usability issues and determine how SSA can address usability during the R&D phase of OIS development.
   b. Obtain information from SSA users concerning their use of occupational information to identify limitations of SSA’s current occupational information sources and desired features in the new OIS.
   c. Examine SSA quality assurance results to identify types and frequency of errors related to step four and five decisions.
   d. Develop and use a process map of adjudicative actions, input, and decision-points for steps four and five of the sequential evaluation process to identify design feature issues.
   e. Sample completed disability decisions to examine critical elements of work history information collected from claimants and occupational information resources used by adjudicators.

4. Primary Products/Outcomes and Milestones Reflecting Estimated Fiscal Year (FY) Completion Dates
   a. SSA User Needs Analysis. [FY 2009]
   b. Consultation with the Panel, the Workgroup, and relevant experts to determine how the R&D phase of OIS development should address usability issues. [FY 2010 – FY 2011]
   c. Process map and documentation of occupational information use in SSA’s disability adjudication process. [FY 2011]
   d. Final report. [FY 2012]

5. Contracts Currently Awarded or Completed as of the Date of the Plan
   None.
F. Identify SSA’s OIS Standards: Scientific

1. Primary Objective
   To identify relevant scientific standards, guidelines, and best practices that enable SSA to meet its responsibilities under applicable Federal requirements, and to incorporate those standards into OIS research and development activities. Applying clearly identified scientific standards ensures the OIS research design establishes a sound framework for the OIS.

2. Key Questions
   a. What existing Federal scientific regulations or guidelines are globally applicable to SSA’s OIS development?
   b. Are there additional standards and best practices in various relevant fields that are relevant globally for SSA’s OIS development?
   c. How do scientific standards relevant to SSA’s OIS relate to the requisite legal standards?

3. General Methodological Approach
   a. Consult with Panel members to identify potential sources of scientific standards and types of reviews needed to establish such standards for SSA’s OIS R&D.
   b. Consult with SSA’s OGC regarding the nexus between scientific and legal standards.
   c. Conduct literature review to identify relevant Federal scientific standards and guidelines, and scientific guidelines issued by (or practices identified by) professional and academic organizations that pertain to development of an OIS.
   d. Consult with SSA staff, Panel members, or other experts and officials to review initial results.
   e. Document and synthesize all findings and identify relevant scientific standards for OIS R&D activities.

4. Primary Products/Outcomes and Milestones Reflecting Estimated Fiscal Year (FY) Completion Dates
   a. Initial consultation with Panel members and OGC. [FY 2011]
   b. Literature review. [FY 2011]
   c. Input from SSA, Panel, or other experts and officials. [FY 2011]
   d. Report identifying relevant standards for OIS R&D activities. [FY 2011]

5. Contracts Currently Awarded or Completed as of the Date of the Plan
   None. SSA has no plans to contract this activity.

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9 For example, President Obama issued a memorandum on March 9, 2009 that articulates six principles central to the preservation and promotion of scientific integrity. (Office of Press Secretary, 2009) The Assistant to the President for Science and Technology and Director of the Office of Science and Technology Policy issued a second memorandum on December 17, 2010 to provide further guidance (Holdren, 2010).

10 SSA defines scientific standards as those applicable to qualitative, quantitative and mixed methods research, as well as best practices when no technical or scientifically tested standards exist.
G. Identify SSA’s OIS Standards: Legal

1. Primary Objective(s)
   To identify standards for evaluating and ensuring that the new OIS accurately reflects the language and the intent of the vocational requirements of the Social Security Act. Major R&D activities will conform to these standards.

2. Key Questions
   a. What is the legal basis for SSA’s authority to develop a new OIS?
   b. What statutory and regulatory requirements apply to SSA’s OIS development?
   c. What legal standards and criteria do the applicable statutes and regulations establish for the development of the new OIS?
   d. What definable features of work must a new OIS include to comply with specific elements of the Social Security Act (Act), regulations, and rulings?
   e. What judicial decisions address relevant legal issues related to OIS development?
   f. What principles of scientific integrity enhance the legal supportability of a new OIS?

3. General Methodological Approach
   a. Research and review the relevant statutes, regulations, and case law.
   b. Consult with SSA’s OGC, the Chief Information Officer (CIO), and other relevant SSA and Panel experts.
   c. Document and synthesize the information obtained and identify relevant legal standards for specific OIS research activities.

4. Primary Products/Outcomes and Milestones Reflecting Estimated Fiscal Year (FY) Completion Dates
   a. Research and review of the relevant statutes, regulations, and case law. [FY 2011]
   b. Consultation with SSA OGC, CIO, and other relevant SSA and Panel experts. [FY 2011]
   c. Report identifying relevant legal standards. [FY 2011]

5. Contracts Currently Awarded or Completed as of the Date of the Plan
   None. SSA has no plans to contract this activity.
H. Identify Key OIS Design Elements

1. Primary Objective(s)
   To establish basic design parameters and requirements for SSA’s new OIS that will ensure that the OIS meets the agency’s legal, scientific, and usability requirements for occupational information.

2. Key Questions
   a. What essential OIS design questions (e.g., regarding OIS requirements, features, development methods) must SSA address to ensure effective and efficient development of a new OIS that meets the agency’s requirements?
   b. What possible OIS design options has SSA identified to address the information from the OIS R&D baseline activities and the OIS legal, scientific, and usability requirements?
   c. Given SSA’s OIS legal, scientific, and usability requirements and the information from SSA’s R&D baseline activities, which OIS design options does SSA find best to ensure effective and efficient development of a new OIS?
   d. How can SSA’s R&D activities lay the groundwork for ongoing maintenance and research (Section VIII. B.)?
   e. What is the sequence and timing for addressing specified design decisions throughout the R&D phase?

3. General Methodological Approach
   a. Synthesize results of prior OIS activities to identify key OIS design issues and questions and possible design options.
   b. Consult with key internal and external experts (e.g., Panel members, contracted industrial organizational (I/O) consultants) to ensure comprehensive identification of key OIS design issues, review SSA’s proposed options, and develop recommendations for OIS design decisions.

4. Primary Products/Outcomes and Milestones Reflecting Estimated Fiscal Year (FY) Completion Dates
   a. Review and summary of OIS R&D baseline and standards results. [FY 2012]
   b. Document identifying relevant design issues, options, sequencing and timing. [FY 2012]
   c. Consultation with experts. [FY 2012]
   d. Paper on OIS design element options. [FY 2012]

5. Contracts Currently Awarded or Completed as of the Date of the Plan
   None.
I. Develop OIS Work Taxonomy

1. Primary Objective
   To identify a comprehensive set of constructs\(^\text{11}\) that may form the basis of SSA’s new OIS. These constructs must reflect the physical and mental-cognitive requirements\(^\text{12}\) of work and context of work that can be objectively measured or delineated to develop an occupational classification. They will provide a foundation for development of the OIS work analysis instrument(s).

2. Key Questions
   a. What is the totality of essential constructs that SSA will use to identify and describe the jobs in SSA’s new OIS?
   b. What design considerations will guide the development of the work taxonomy constructs (e.g., concrete, behavioral, observable)?
   c. Because the new OIS must ultimately serve SSA’s specific disability evaluation needs, what are SSA’s program requirements that support functional and vocational assessment at steps four and five of the sequential evaluation process\(^\text{13}\) and how might these inform the OIS work taxonomy constructs?
   d. What other sources of information on potentially applicable disability evaluation needs should SSA consider? To what extent do these other sources identify the same 3 or similar constructs as those identified in SSA’s policy sources?

3. General Methodological Approach
   a. Review previously developed reports related to SSA work taxonomy development (e.g., SSA working papers, Panel reports) to identify methods for work taxonomy development and alternative taxonomies and constructs.
   b. Conduct additional literature review pertaining to development of OIS work taxonomies.
   c. Consult with relevant experts (e.g., the Workgroup, Panel members) to identify work taxonomy methods and constructs.
   d. Develop a list, or inventory, of disability evaluation constructs based on SSA program requirements, Panel recommendations, public comments, and other relevant sources that inform SSA’s consideration of functional and vocational factors for disability evaluation constructs.\(^\text{14}\)

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\(^{11}\) Work behaviors, activities, duties, responsibilities, and contextual characteristics such as environmental conditions that can be applied to all jobs and for which data are observable and can be empirically linked to unobservable characteristics that are deduced from an individual’s behavior. They are also referenced as “data elements” or “job descriptors.”

\(^{12}\) Work requirements include skills.

\(^{13}\) 20 CFR 404.1520, 416.920. SSA determines whether the impairment(s) prevents the claimant from doing basic work activities, defined in SSA regulations as “abilities and aptitudes necessary to do most jobs.” Examples include physical functions such as walking, standing, sitting, lifting, carrying, reaching, handling, capacities for seeing, hearing, and speaking, understanding, carrying out, and remembering simple instructions, use of judgment, responding appropriately to supervision, co-workers, and dealing with changes in a routine work setting.

\(^{14}\) Includes SSA program requirements and relevant elements involving human function and vocational factors that SSA and professionals involved in the disability or rehabilitation communities report or recommend and critical to assessing the person or claimant, specifically as the assessment relates to SSA disability programs. The disability evaluation constructs do not comprise the work taxonomy. Rather they will help orient staff and work analysis experts regarding the type of information about work that would be most critical for disability evaluation.
e. Determine the level of detail of occupational data that SSA must reflect in the work taxonomy, considering the results of usability standards (see Section IV. E.) and the level of information that may be provided by the application of general and detailed work activities (detailed work activities, for example, reflected in the Occupational Information Network or O*NET), or equivalent information through consultation with Department of Labor, Employment Training Administration.

f. Drawing on the results of prior OIS R&D activities, the work taxonomy literature review, and the disability evaluation constructs inventory, and working closely with internal and external experts (e.g., the Panel), apply relevant I/O expertise and methods to fully develop a prototype OIS work taxonomy based on the Panel’s work taxonomy recommendations.

g. Conduct expert analytic assessment of the extent to which the work taxonomy constructs may facilitate the linkage of eventual OIS work data with SSA’s disability evaluation constructs, and document the results for future empirical testing.15

h. Conduct literature review to identify methods for linking attributes of human function and vocational factors with new OIS data. Consult with internal and external experts to identify methods for linking attributes of human function and vocational factors with new OIS data.

4. Primary Products/Outcomes and Milestones Reflecting Estimated Fiscal Year (FY) Completion Dates
   a. Disability evaluation construct inventory that orients SSA and work analysis experts to SSA’s program and disability evaluation needs as work taxonomy and work analysis instrument(s) development progress. [FY 2011]
   b. Work taxonomy literature review. [FY 2011]
   c. Comprehensive prototype OIS work taxonomy. [FY 2012]
   d. Report from literature review and consultation assessing methods for linking human function and vocational factors and implications for OIS design. [FY 2012]

5. Contracts Currently Awarded or Completed as of the Date of the Plan
   None.

15 The essential question SSA must address with this task is whether, given SSA’s needs, the work taxonomy includes all the relevant and critical constructs that are possible to obtain objectively.
J. Develop and Pretest Prototype Work Analysis Instrument(s)

1. Primary Objective
   To develop and pretest questions and response categories, including scales and measures, instrument structure, and technical format (e.g., software), that will enable SSA to systematically collect work-side data. This data will inform the work and the title taxonomies that will form the basis for SSA’s new OIS. SSA may conduct pretesting on a less extensive scale than the prototype pilot, to ensure that the instrument(s) is ready for subsequent quantitative validation (see Section IV. N.).

2. Key Questions
   a. How will the occupational classification design decisions considered and addressed in the development of a prototype work taxonomy affect the development of the work analysis instrument(s)? Given SSA’s OIS criteria, what sources (e.g., analysts, incumbents, supervisors) and stimuli (e.g., observation, interviews, surveys) should SSA consider pretesting?
   b. How can SSA ensure that the instrument components it develops (items, measures, and scales) can be applied for cross-job and cross-occupation comparison?
   c. How are the constructs and related data elements directly observable or otherwise verifiable or measurable?
   d. How will the work analysis instrument(s) design and content enable or support the adjudicators’ association of work constructs with the intended disability evaluation constructs involving human function or vocational factors?
   e. What criteria and methods should SSA use to ensure that the number of OIS elements collected and reported is concise, but also sufficient to provide an accurate and valid assessment of work demands?
   f. What criteria and methods should SSA use to ensure that initial work taxonomy constructs are accurately reflected in work analysis instrument(s) items?
   g. What quantitative or qualitative methods should SSA use to pretest the instrument(s) to check its functionality and to ensure it meets basic requirements before the agency conducts a full quantitative validation of the instrument(s) (and process) through prototype and national pilots (see Section IV, subsections N. and P.)?
   h. How effective is the instrument(s) in terms of ease and length of administration, comprehensiveness of items, ability of items to elicit desired information, technical performance and reliability, and other key instrument metrics?
   i. What quantitative or qualitative methods should SSA use to establish a baseline regarding the validity of the instrument(s) to ensure instrument’s readiness for a full quantitative validation of the instrument(s) (and process) through prototype and national pilots (see Section IV, subsections N. and P.)?
   j. What tools or platforms should SSA consider and develop to administer these instruments (e.g., electronic questionnaires)?

3. General Methodological Approach
   a. Conduct literature review regarding work analysis instrument(s) development techniques and attendant psychometric and other technical issues.
   b. Consult with internal and external experts regarding instrument development plans and results.
c. Develop and carry-out process for item writing and development (e.g., assembling experienced item-writers to create items for specified work taxonomy constructs) including the development of branching architecture and technical (e.g., software) format.

d. Conduct analytic validation pretest to prepare for instrument testing (see Section IV, subsection N.).

e. Conduct pretest of prototype instrument(s) to prepare for prototype pilot (see Section IV, subsection N.).

f. Conduct expert analytic or qualitative assessment of the extent to which the work analysis instrument(s) items and measures facilitate the linkage of OIS work data with SSA disability evaluation constructs, and document the results for future empirical testing.

g. Revise instrument(s) based on pre-test and validation results.

4. Primary Products/Outcomes and Milestones Reflecting Estimated Fiscal Year (FY) Completion Dates

a. Complete literature review report. [FY 2012]

b. Complete prototype work analysis instrument(s). [FY 2012]

c. Conduct instrument validation and pretesting. [FY 2013]

d. Conduct instrument baseline validation in preparation for subsequent pilots. [FY 2012]

e. Prepare report on pretesting and validation results. [FY 2013]

f. Revise prototype work analysis instrument(s) to prepare for deployment in prototype pilot (Section IV. N.). [FY 2013]

5. Contracts Currently Awarded or Completed as of the Date of the Plan

None.
K. Develop Prototype OIS Sampling Plan

1. Primary Objective
   To develop criteria and methods for obtaining a representative sample of work establishments and jobs for OIS data collection.

2. Key Questions
   a. What are the OIS sample objectives, and how do they address or align with general SSA OIS requirements?
   b. What is the target population for OIS data collection (e.g., work establishments, workers, and occupations) and how will SSA locate establishments that have the type of positions SSA needs to evaluate?
   c. What are the major units of the target population (e.g., geographic clusters, industries, and types of employment) that are relevant for OIS data collection, and how will SSA’s sampling account for these units?
   d. What sampling frame will SSA use? What criteria will SSA apply to evaluate and select among multiple possible sampling frames?
   e. What types of sampling will SSA conduct (e.g., stratified random sample)?
   f. What level of sampling precision does SSA’s OIS require, and what sample size does SSA need to meet the precision criterion?
   g. What criteria and procedures are used for sample selection, establishment of sampling rates, and the treatment of missing (e.g., non-responding) sample cases or items?
   h. What parameters should SSA use to determine the timing and frequency of sampling?
   i. To what extent can the experiences of other Federal agencies concerning the use and/or development of occupational information inform SSA’s OIS sampling decisions or sources?
   j. What should SSA use as a starting point for an initial title taxonomy for prototype sampling and data collection?16

3. General Methodological Approach
   a. Conduct literature review to identify alternative sampling approaches and standards.
   b. Consult with internal and external experts (e.g., through unstructured, semi-structured consultations, focus groups, roundtables) to identify alternative sampling approaches and standards.
   c. Develop initial (theoretical) model of title taxonomy, drawing possibly on existing frameworks (e.g., DOT) and on data developed from OIS baseline studies (e.g., most common occupations comprising SSA disability claimant work histories as identified in the Occupational and Medical Vocational Study; see Section IV, B.)
   d. Develop a comprehensive prototype plan for OIS sampling, solicit expert review of the plan, and revise accordingly.

4. Primary Products/Outcomes and Milestones Reflecting Estimated Fiscal Year (FY) Completion Dates
   a. Report of literature review and consultations with experts. [FY 2012]

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16 SSA needs an initial title taxonomy to provide for sampling and data collection.
b. Initial (theoretical) model of title taxonomy for instrument testing and use in prototype and national pilots. [FY 2012]
c. Prototype OIS sampling plan. [FY 2013]

5. Contracts Currently Awarded or Completed as of the Date of the Plan
None.
L. Develop and Test Prototype OIS Data Collection Methods and Data Management System

1. Primary Objective
   To develop and test the methods, standards, and systems that SSA will use to collect and record data for SSA’s new OIS. These methods include those pertaining to the recruitment, training, and certification of job analysts as well as the development of a data management plan and system for job analysis data.

2. Key Questions
   a. Using results of investigation and benchmarking, job analysis methodologies, and business processes for recruiting, training, and certifying job analysts (Section IV, C.-D.), how will SSA operationalize its data collection process?
      • What modes of data collection will SSA use (e.g., survey, observation) to collect OIS data, and what criteria and standards will guide these decisions?
      • What processes will SSA use to recruit, train, and certify job analysts?
   b. What processes will SSA use to ensure the fidelity of the data collection process (e.g., accuracy assessments)?
   c. How will SSA establish a database structure, architecture, and data warehousing that enable audit capabilities, data security, and proper deployment of protocol for job analysis testing and validation?
   d. What steps will SSA need to take to integrate the OIS data management plan and system into SSA’s systems?
   e. How are the proposed data collection methods, recruitment, training, and certification plan, and data management system likely to meet SSA’s OIS standards and design requirements?

3. General Methodological Approach
   a. Identify or formulate specific data collection methods and standards (including recruitment, training, and certification) for SSA’s new OIS by:
      • Conducting in-depth literature review.
      • Obtaining input from relevant experts (e.g., through interviews, focus groups, roundtables).
   b. Develop a prototype data collection process consistent with SSA’s OIS requirements and include:
      • Processes for job analyst recruitment, training, certification, and assignment;
      • Detailed protocols for identifying, contacting and arranging visits with establishments that are consistent with sampling requirements;
      • Identification and review of appropriate jobs and positions within establishments that are consistent with sampling requirements;
      • Procedures for interviewing or observing participants,\(^\text{17}\) collecting supporting evidence or documentation, and transmitting data to the established data base;
      • Job analysis quality standards, and review or verification requirements, and
      • Options to address problems or shortcomings related to job analyst performance.

\(^{17}\) In addition to protocols for completing a work analysis instrument, this may include instructions for multiple job analyst reviews of a single position.
c. Conduct operational tests of the data collection process for multiple, small samples of job analysts, establishments, and jobs, and revise process as needed.
d. Develop the general business requirements for data system based on work analysis instrument(s) database.
e. Develop detailed operational requirements for the data system.
g. Build data system using the detailed functional requirements.
h. Develop system documentation, including user manuals and operations manuals, to document inputs, outputs, screen designs, data sources, and other relevant information about the system.
i. Conduct pilot test of data system and protocols to prepare for data collection testing and validation.

4. Primary Products/Outcomes and Milestones Reflecting Estimated Fiscal Year (FY) Completion Dates
   a. Report of the literature review and expert input solicitation results. [FY 2012]
   b. Initial draft data collection process and standards (including recruitment, training, certification). [FY 2012]
   c. Report on results of data collection process tests. [FY 2013]
   d. Revised draft data collection process and standards. [FY 2013]
   e. Report identifying data collection system operational requirements, security plan, and documentation. [FY 2012]
   f. Prototype data collection system. [FY 2013]
   g. Report on results of data system testing. [FY 2013]
   h. Revised prototype data collection system. [FY 2013]

5. Contracts Currently Awarded or Completed as of the Date of the Plan
None.
M. Develop Prototype OIS Data Analysis Plan

1. Primary Objective
   To develop the methods and standards that SSA will use to analyze data collected for SSA’s new OIS.

2. Key Questions
   a. What are SSA’s OIS analytic objectives (e.g., aggregation of position-level data to job- and occupation-level categories and calculation of occupational prevalence)? How do they address or align with general SSA OIS requirements?
   b. What validity indices should SSA consider given the OIS requirements and SSA’s analytic objectives?
   c. What analytic methods will SSA use to generate these results?
   d. Are there any changes in the data collection process that SSA should consider?

3. General Methodological Approach
   a. Conduct literature review to identify possible methods for analyzing work analysis data.
   b. Using results of investigating existing OISs (Section IV, A.), incorporate any data analysis protocols that may be relevant for SSA OIS.
   c. Consult with experts (through interviews, focus groups, or roundtables) to identify most relevant and effective methods for analyzing work analysis data.
   d. Develop a comprehensive plan for analysis of occupational data, solicit expert review of the plan, and revise accordingly.

4. Primary Products/Outcomes and Milestones Reflecting Estimated Fiscal Year (FY) Completion Dates
   a. Report of results of literature review and expert consultation. [FY 2012]
   b. Comprehensive data analysis plan. [FY 2013]
   c. Solicit expert review of the plan and revise accordingly. [FY 2013]

5. Contracts Currently Awarded or Completed as of the Date of the Plan
   None.
N. Prototype Pilot: Conduct Pilot of Prototype OIS Data Collection and Analysis Processes

1. Primary Objective
To test the integration of OIS prototype data collection and analysis processes, including work taxonomy; work analysis instrument(s); sampling plan; job analyst recruitment, training, certification, and assignment process; job analyst protocol; data management system; and data analysis methods. The prototype pilot will enable SSA to refine these processes for use in the subsequent national pilot.

2. Key Questions
   a. How many units (e.g., establishments, occupations) will be included in the prototype pilot test, and what criteria will guide this decision?
   b. What types of units will be included in the pilot test, and what criteria will guide this decision?
   c. How can SSA effectively and efficiently address the OMB Paperwork Reduction Act (PRA) statistical survey clearance process requirements?
   d. How can SSA effectively and efficiently recruit, train, certify, and assign job analysts for the prototype pilot?
   e. Are job analysts effectively and efficiently administering the work analysis instrument(s) and adhering to the data collection protocol?
   f. Does the OIS data collection process produce valid data?
   g. Is the OIS data management system functional and effective?
   h. Is SSA able to successfully conduct the required analyses of the OIS data?
   i. How do the testing results inform revision and refinements to the OIS work taxonomy, work analysis instrument(s), sampling plan, job analyst recruitment, training, certification, and assignment process, job analyst protocol, data management system, and data analysis methods that may be needed to meet SSA’s OIS requirements?
   j. What can SSA learn for OIS design from the occupational information collected as part of the data collection and analysis pilot? (For example, does the information help SSA determine what level of within-title heterogeneity is acceptable given the agency’s program needs?)

3. General Methodological Approach
   a. Develop an integrated OIS data collection and analysis process based on the prototypes developed from preceding OIS R&D activities.
   b. Select occupations and locations for participation in the pilot based on a modified OIS sampling protocol.
   c. Meet with relevant OMB staff regarding PRA clearance for OIS data collection and develop and submit the required documentation to obtain approval.
   d. Recruit, train, and certify the number of job analysts needed for the test.
   e. Conduct pilot test.
   f. Evaluate the performance of each the data collection operational components in terms of established standards and requirements.
   g. Evaluate data collected from the pilot in terms of established standards and requirements (i.e., does the data produced meet SSA’s OIS needs).
h. Evaluate data to identify specific findings relevant to refinement of SSA’s OIS requirements and design.

4. Primary Products/Outcomes and Milestones Reflecting Estimated Fiscal Year (FY) Completion Dates
   a. Plan for conducting prototype pilot of the OIS data collection and analysis process, including a process to recruit, train, and certify the appropriate number of job analysts needed for the prototype pilot. [FY 2013]
   b. Clearance from OMB for the prototype pilot plan. [FY 2013]
   c. Prototype pilot. [FY 2014]
   d. Analysis and report of the pilot results that describes the types of revisions to the data collection and analysis process and instrument(s) SSA needs to make, including any necessary refinements to OIS design requirements. [FY 2014]
   e. A set of test data for a small number of occupations, which provides a basis for examining assumptions and requirements. [FY 2014]

5. Contracts Currently Awarded or Completed as of the Date of the Plan
   None.
O. National Pilot: Refine Data Collection and Analysis Process and Instrument(s) Based on Prototype Pilot Results to Prepare for National Pilot

1. Primary Objective
To use prototype pilot results to revise the integrated OIS data collection and analysis processes, including: work taxonomy; work analysis instrument(s); sampling plan; job analyst recruitment, training, certification, and assignment process; job analyst protocol; data management system; and data analysis methods. This activity will prepare SSA to conduct the subsequent national pilot.

2. Key Questions
a. Based on reported results of the prototype pilot (see Section IV. N.), what specific revisions and refinements must SSA make to the OIS work taxonomy, work analysis instrument(s), sampling plan, job analyst recruitment, training, certification, and assignment process, job analyst protocol, data management system, and data analysis methods to meet SSA’s OIS requirements?

b. What changes, if any, should SSA make to the OIS requirements and assumptions based on the prototype pilot results and SSA’s analysis of the specific occupational information it collected during the prototype pilot? (For example, does the information help SSA determine what level of within-title heterogeneity is acceptable given the agency’s program needs?)

3. General Methodological Approach
a. Systematically identify all relevant prototype pilot result and recommendations in the prototype pilot report (Section IV. M.) and develop a plan for addressing each one, including possible refinements of SSA’s OIS requirements and design.

b. Consult with relevant experts on the revisions SSA plans to make to its OIS data collection and analysis process, instrument(s), and requirements.

c. Make changes to the data collection and analysis process and instrument(s) in accordance with the plan developed in 3.a, above.

4. Primary Products/Outcomes and Milestones Reflecting Estimated Fiscal Year (FY) Completion Dates
a. Plan for addressing prototype pilot test results to prepare for national pilot test. [FY 2014]

b. Revised data collection and analysis process and instrument(s) [FY 2014], including:
   - Refined work taxonomy.
   - Refined work analysis instrument(s).
   - Refined sampling plan.
   - Refined job analyst recruitment, training, certification, and assignment business process.
   - Refined job analysis methods and protocol.
   - Refined data management system (e.g., database architecture and data warehousing).
   - Refined data analysis plan.
5. Contracts Currently Awarded or Completed as of the Date of the Plan
None.
P. National Pilot: Conduct National Pilot of OIS Data Collection and Analysis Process

1. Primary Objective
   To test the revised OIS data collection and analysis processes (including associated instrument(s)) on a large scale and in a comprehensive manner to determine if they will produce an OIS that meets the agency’s requirements. Such testing is a vital prerequisite for a national staged rollout of the new OIS data collection process.

2. Key Questions
   a. How many units (e.g., establishments, occupations) will be included in the national pilot, and what criteria will guide this decision?
   b. What types of units will be included in the national pilot, and what criteria will guide this decision?
   c. How can SSA effectively and efficiently address the OMB Paperwork Reduction Act (PRA) statistical survey clearance process requirements?
   d. How can SSA effectively and efficiently recruit, train, certify, and assign job analysts for the national pilot?
   e. Are job analysts effectively and efficiently administering the work analysis instrument(s) and adhering to the data collection protocol?
   f. Does the OIS data collection process produce valid data?
   g. Is the OIS data management system functional and effective?
   h. Is SSA able to conduct successfully the required analyses of the OIS data?
   i. How do the national pilot results inform revision and refinements of the OIS work taxonomy, work analysis instrument(s), sampling plan, job analyst recruitment, training, certification, and assignment process, job analyst protocol, data management system, and data analysis methods that may be needed to meet SSA’s OIS requirements?
   j. Does the occupational information collected as part of the national data collection and analysis pilot contribute to OIS design? (For example, does the information help SSA determine an acceptable level of within-title heterogeneity?)

3. General Methodological Approach
   a. Develop a comprehensive plan to test and evaluate the revised OIS data collection and analysis process.
   b. Select occupations and locations for participation in the national pilot based on the OIS sampling plan.
   c. Meet with relevant OMB staff regarding PRA clearance for OIS data collection and develop and submit the required documentation to obtain approval.
   d. Recruit, train, and certify the job analysts needed for the national pilot.
   e. Ensure that the data management system is fully operational, including direct integration of the electronic work analysis instrument(s).
   f. Conduct national pilot.
   g. Evaluate the performance of each of the data collection operational components in terms of established standards and requirements.

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18 These questions are similar to the key questions from Prototype Pilot: Conduct Pilot of Prototype OIS Data Collection and Analysis Processes (Section IV. N.).
h. Evaluate data collected from the national pilot in terms of established standards and requirements (i.e., do the data produced meet SSA’s OIS needs).

i. Evaluate data to identify specific findings relevant to refinement of SSA’s OIS requirements and design.

4. Primary Products/Outcomes and Milestones Reflecting Estimated Fiscal Year (FY) Completion Dates

a. Plan for conducting national pilot of revised data collection and analysis process. [FY 2014]

b. Clearance of national pilot plan with OMB. [FY 2014]

c. National pilot. [FY 2015]

d. Report describing the national pilot results, the principal issues identified, the required revisions to the data collection and analysis process and instrument(s), any refinements of OIS design requirements, and an overall assessment SSA’s readiness to proceed with a staged rollout of OIS national data collection. [FY 2015]

e. A set of test data for a substantial number of occupations, which provides a further basis for examining OIS R&D assumptions and requirements. [FY 2015]

5. Contracts Currently Awarded or Completed as of the Date of the Plan

None.
Q. Develop Occupational Title Taxonomy

1. Primary Objective
   To identify the entities (occupations), categories, and definitions that will constitute the structure of SSA’s new OIS.

2. Key Questions
   a. How do SSA’s OIS design decisions and requirements affect the development of the title taxonomy?
   b. How has the national pilot informed the development of the title taxonomy?
   c. What entities (e.g., occupations and industries) should the OIS title taxonomy describe?
   d. How will SSA crosswalk the OIS title taxonomy to other Federal classifications, such as the Standard Occupational Classification, O*NET, and the North American Industrial Classification System?
   e. How comprehensive does the taxonomy need to be (e.g., all occupations in national economy or only jobs most prevalent among SSA claimants)?
   f. Must all the occupations reflected in the OIS title taxonomy be defined at the same level of detail or granularity to serve SSA’s program needs?
   g. How will the OIS taxonomy criteria and structure minimize within-title heterogeneity, and what standards will SSA apply in assessing such heterogeneity (e.g., how much heterogeneity is too much)?
   h. How can SSA minimize threats to validity stemming from aggregation bias?

3. General Methodological Approach
   a. Conduct literature review to identify OIS taxonomic requirements and consult with internal and external experts to identify OIS taxonomic requirements.
   b. Investigate existing occupational title taxonomies, including exploring with the Department of Labor ways in which the SSA OIS title taxonomy relates to the O*NET, the North American Industrial Classification System, and the Standard Occupational System and developing a crosswalk between the OIS and other classifications as appropriate.
   c. Analyze results of national pilot and refine title taxonomy.

4. Primary Products/Outcomes and Milestones Reflecting Estimated Fiscal Year (FY) Completion Dates
   a. Title taxonomy working paper. [FY 2009]
   b. Revised title taxonomy based on results from national pilot. [FY 2015]

5. Contracts Currently Awarded or Completed as of the Date of the Plan
   None.
R. Evaluate Potential Integration of New OIS into SSA’s Program Operations and Assess the Application of the New OIS Data

1. Primary Objective
   To evaluate new OIS data gathered from the national pilot to identify how well adjudicators can associate the OIS information with SSA program data. This will allow SSA to make any needed refinements to OIS data collection and analysis processes and instrument(s) (in particular the work taxonomy and work analysis instrument) before the staged rollout of OIS national data collection. It will also inform the development of SSA’s plans for disability process and systems integration, and user training.

2. Key Questions
   a. Does the new OIS facilitate SSA’s ability to:
      - Satisfy SSA’s program and operational requirements?
      - Render legally sound decisions?
      - Associate the assessment of claimants’ RFC and vocational profiles with work requirements identified in the OIS?
      - Create an OIS that is responsive to changes in occupations over time?
   b. Considering the outcomes of the prototype and national pilots, what changes should SSA make to the OIS design, including the work taxonomy, work analysis instrument(s), and sampling and data collection methods, to better ensure that the OIS meets SSA’s requirements for both functional and vocational (e.g., skill) assessment?
   c. What methods (e.g., synthetic validity) should SSA test to determine the most effective ways to link OIS work constructs and measures to the attributes of human function and vocational factors that the agency considers in disability adjudication?

3. General Methodological Approach
   a. Identify the range of users from whom SSA will obtain input regarding use of new OIS data.
   b. Conduct interviews and focus groups with users.
   c. Conduct structured OIS data review sessions where users review data generated from OIS data collection efforts (e.g., from OIS pilots) and complete a questionnaire to provide feedback regarding the operational utility of these data.
   d. Conduct study(ies) involving completed SSA disability claims to compare the application of new OIS data obtained from the national pilot with the application of pre-OIS occupational resources to assess relative utility of new OIS data and potential operational and programmatic gaps.
   e. Refine OIS usability standards and classification design, including work taxonomy and work analysis instrument(s), job analyst business process, and sampling and data collection plans.

4. Primary Products and Outcomes and Milestones Reflecting Estimated Fiscal Year (FY) Completion Dates
   a. Report of initial user assessments of OIS data and constructs. [FY 2014]
b. Report assessing the relative utility of new OIS data and implications for OIS design. [FY 2015]
c. Report assessing methods for linking human function and vocational factors using new OIS data. [FY 2015]

5. Contracts Currently Awarded or Completed as of the Date of the Plan
None.
V. Implement National Rollout for OIS Data Collection

After SSA completes the national OIS pilot (Section IV. P.) and evaluates results, including the potential integration of new OIS data into SSA’s program operations (Section IV. R.), SSA will begin national OIS data collection. The following section outlines the activities SSA plans to conduct to prepare for and implement OIS data collection:

- Refine the integrated OIS data collection and analysis process and instrument(s).
- Identify the specific logistical and operational requirements, timing, and resources that SSA needs to implement the staged rollout of national data collection.
- Conduct a staged rollout of national data collection for the OIS using the integrated OIS data collection and analysis process and instrument(s).

The organization of this section reflects each of the major project activities described in terms of the following elements:

1. Primary Objective
2. Key Questions
3. General Methodological Approach
4. Primary Products/Outcomes and Milestones Reflecting Estimated Fiscal Year (FY) Completion Date
5. Contracts Currently Awarded or Completed as of the Date of the Plan

As the project progresses, SSA will develop the activities summarized in this section based on the Phase I and II documents required by the OIS business process (see Section III.A). Results of the investigations, studies, and other research activities described in Section IV will refine the OIS R&D plan, which SSA will update at least once each fiscal year.
A. Revise Data Collection and Analysis Process and Instrument(s) to Prepare for Staged Rollout

1. Primary Objective
   To use national pilot results to refine the integrated OIS data collection and analysis process and instrument(s), including: work taxonomy; work analysis instrument(s); sampling plan; job analyst recruitment, training, certification, and assignment process; job analyst protocol; data management system; data analysis methods, and the title taxonomy. This activity will prepare SSA to conduct the staged rollout of OIS national data collection.

2. Key Questions
   a. Based on results of the national pilot (see Section IV. P), what specific changes should SSA make to OIS processes and products to meet SSA’s OIS requirements:
      • work taxonomy and work analysis instrument(s),
      • staged sampling plan,
      • job analyst recruitment, training, certification, and assignment process,
      • job analyst protocol,
      • data management system,
      • data analysis methods and,
      • title taxonomy?
   b. What changes, if any, should SSA make to SSA’s OIS requirements and assumptions based on the national pilot results and SSA’s analysis of specific occupational information it collected from national pilot? (For example, does the information help SSA determine what level of within-title heterogeneity is acceptable given the agency’s program needs?)

3. General Methodological Approach
   a. Systematically identify all relevant national pilot results and recommendations in the national pilot report (Section IV. O), and develop a plan to address each one, including possible refinements of SSA’s OIS requirements and design.
   b. Consult with relevant experts on final revisions.
   c. Make final changes to the OIS data collection and analysis process and instrument(s) according to the plan and expert consultation as cited in 3.a. and 3.b.above.
   d. Meet with relevant OMB staff regarding PRA clearance for OIS data collection and develop and submit the required documentation to obtain approval.
   e. Contact all other relevant stakeholders, including SSA’s Office of Systems or other Federal agencies, that may be furnishing information or assistance (e.g., sampling frame, hardware) to ensure activities and product delivery are coordinated.

4. Primary Products/Outcomes and Milestones Reflecting Estimated Fiscal Year (FY) Completion Dates
   a. Plan for addressing national pilot results in preparation for national staged rollout. [FY 2015]
   b. Final revised data collection and analysis process and instrument(s) [FY 2015] including:
      ▪ Refined work taxonomy.
      ▪ Refined work analysis instrument(s).
- Refined sampling plan.
- Refined job analyst recruitment, training, certification, and assignment business process.
- Refined job analysis methods and protocol.
- Refined data management system (e.g., database architecture and data warehousing).
- Refined data analysis plan.
- Refined title taxonomy.

c. OMB clearance for sampling and data collection plans. [FY 2015]

5. Contracts Currently Awarded or Completed as of the Date of the Plan
   None.
B. Develop Implementation Plan for Staged Rollout

1. Primary Objective
   To identify the specific logistical and operational requirements, timing, and resources—
   beyond those required for the national pilot—that SSA needs so that it can implement the
   staged rollout of national data collection.

2. Key Questions
   a. What logistical factors does SSA need to address?
   b. What are the specific operational steps that SSA needs to take, as well as their
      sequence and timing?
   c. How will SSA select and notify employer entities?
   d. How will SSA define and delineate the stages for national data collection (e.g.,
      occupation, geographic area)?
   e. What resources does SSA require to complete the steps to conduct OIS data
      collection and analysis?
   f. How will SSA define, schedule, and execute each of the data collection stages?

3. General Methodological Approach
   a. Identify the logistical factors, operational steps (including sequence and timing),
      resources (beyond those required for the national pilot), and stages that SSA needs to
      address to conduct the staged rollout of national data collection.
   b. Prepare an implementation plan addressing the logistics, steps, resources, and data
      collection stages. (SSA will base the budget request for the staged rollout on
      estimates derived from the national pilot effort.)
   c. Obtain both SSA and external expert consultation and review regarding the
      implementation plan.

4. Primary Products/Outcomes and Milestones Reflecting Estimated Fiscal Year (FY)
   Completion Dates:
   a. Detailed staged rollout for OIS national data collection implementation plan. [FY
      2016]
   b. Expert review of national data collection implementation plan. [FY 2016].

5. Contracts Currently Awarded or Completed as of the Date of the Plan
   None.
C. Conduct Staged Rollout

1. Primary Objective(s)
   To conduct a staged rollout of national data collection for the OIS using the integrated OIS data collection and analysis process and instrument(s), including: work taxonomy and work analysis instrument(s); sampling plan; job analyst recruitment, training, certification, and assignment process; job analyst protocol; data management system; data analysis methods; and, the title taxonomy.

2. Key Questions
   a. How will SSA monitor the data collection process as each staged rollout proceeds?
   b. How will SSA respond to problems it identifies through monitoring?
   c. What data analyses should SSA conduct during and immediately following each staged rollout? How might these analyses affect subsequent stages of data collection?
   d. What program evaluation and other studies will SSA conduct to determine and confirm suitability of the use of new OIS data in SSA’s disability process?
   e. How will SSA make new OIS data available to SSA users and to the public?

3. General Methodological Approach
   b. Notify employer entities involved for each stage of data collection.
   c. Conduct staged rollout of national data collection.
   d. Conduct data analyses of results during and immediately following each stage of data collection.
   e. Conduct program evaluation studies.
   f. Develop process for delivering OIS data to users and public.
   g. Make data available to SSA and public.

4. Primary Product/Outcome and Milestones Reflecting Estimated Fiscal Year (FY) Completion Dates
   a. Monitoring and response process. [FY 2016]
   b. Employer entity notification. [FY 2016]
   c. First stage of national data collection. [FY 2016]
   d. Data analyses of first set of results. [FY 2016]
   e. Initial program evaluation. [FY 2016]
   f. Data delivery process. [FY 2016]
   g. First set of data available to SSA users and public. [FY 2016]

5. Contracts Currently Awarded or Completed as of the Date of the Plan
   None.
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VI. OIS R&D Plan Timeline

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<td>B. Conduct Occupational and Medical-Vocational Claims Review Study</td>
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<td>C. Investigation and Benchmarking of Job Analysis Methodologies</td>
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<td>D. Investigation and Benchmarking of Business Processes for Recruiting, Training, and Certifying Job Analysts</td>
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<td>H. Identify Key OIS Design Elements</td>
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<td>I. Develop OIS Work Taxonomy</td>
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<td>J. Develop and Pretest Prototype Work Analysis Instrument(s)</td>
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<td>K. Develop Prototype OIS Sampling Plan</td>
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<td>L. Develop and Test Prototype Data Collection Methods and Data Management System</td>
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<td>M. Develop Prototype OIS Data Analysis Plan</td>
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<td>N. Prototype Pilot: Conduct Pilot of Prototype OIS Data Collection and Analysis Processes</td>
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<td>O. Refine Data Collection and Analysis Process and Instrument(s) Based on Prototype Pilot Results to Prepare for National Pilot</td>
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<td>P. Conduct National Pilot of OIS Data Collection and Analysis Process</td>
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<td>Q. Develop Occupational Title Taxonomy</td>
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<td>R. Evaluate Potential Integration of New OIS Into SSA’s Program Operations and Assess the Application of the new OIS Data</td>
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<td>V. Implement National Rollout for OIS Data Collection:</td>
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<td>C. Conduct Staged Rollout</td>
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Note: The R&D Plan timeline reflects dates through the first stage of rollout for National OIS Data Collection.
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VII. Post-R&D Activities

As SSA collects data throughout the staged rollout of national data collection (Section VI), the agency will gradually integrate the new OIS data resulting from OIS R&D activities into the agency’s disability process and systems. Social Security Administration plans to leverage the applicable technology to make the new OIS data available to SSA adjudicators in a seamless manner that is more efficient than the current process and that allows for the requisite adjudicative judgment. The OIS data collection and analysis process created during the OIS R&D phase will become the basis for SSA’s ongoing maintenance and research for the OIS. The subsections below delineate several critical activities SSA will need to undertake throughout the post-R&D phases of the OIS project.

A. Disability Process and Systems Integration

1. The OIS Development Workgroup will examine possible program policy and processes options. The agency may develop and test options, if needed.
2. The OIS Development Workgroup and OVRD will conduct user needs analyses with DDSs and Office of Disability Adjudication and Review adjudicators to identify user requested interface and functionality requirements needed for systems integration.
3. The agency will integrate the OIS with disability systems (e.g., SSA’s disability claims processing system and the electronic case analysis tool).
4. Drawing on multi-component support in addition to the Workgroup, SSA will develop and implement a training program for all SSA users. The agency will also develop a public information program to help non-SSA OIS users become familiar with the new OIS.

B. Ongoing Maintenance and Research

The agency will take up these activities:

1. Develop working models of the work and title taxonomies.
2. Conduct routine program evaluation.
3. Conduct routine data analyses.
4. Develop and assess indicators for possible changes in occupations, and verify indication of changes.
5. Conduct studies to evaluate and compare potential application of empirical methods to link SSA’s OIS data with attributes of human function and vocational factors.
6. Continue OIS data collection and renewal.
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VIII. References


*Kerner v. Fleming*, 283 F2d 916 (2d Cir. NY, 1960).


20 CFR, Part 404, Subpart P; Part 416, Subpart I.

42 USC 423 (2010).
Appendix I - Background

SSA has a unique need for occupational information in its disability adjudication process. An understanding of that process and those needs provides an important basis for understanding the elements presented in this strategic plan.

Definition of Disability

When SSA’s disability insurance program for cash benefits was enacted in 1956, the law did not specifically require consideration of RFC and the vocational factors of age, education, and work experience to determine eligibility. The Social Security Act defined disability as the “inability to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment which can be expected to result in death or be of long-continued and indefinite duration.”

However, it soon became apparent that disability could not always be decided on medical factors alone. By the early 1960s, SSA encountered numerous judicial and Congressional challenges involving cases in which SSA had considered vocational factors and denied disability on the basis that a claimant was able to work despite his or her impairment. SSA addressed these challenges through statutory changes and routine consultation of government occupational resources. SSA introduced a legislative proposal to include, among other changes, the consideration of vocational factors. Congress incorporated SSA’s proposal and passed the 1967 Amendments that added the consideration of vocational factors to SSA’s definition of disability. Since 1967, SSA and others interpret the definition of disability in section 223(d) of the Act to require SSA to look to the world of work to determine if an impairment(s) is disabling when an adult’s claim cannot be decided by medical facts alone. The following language was added to the law in 1967 and remains in effect today:

“An individual shall be determined to be under a disability only if his physical or mental impairment or impairments are of such severity that he is not only unable to do his previous work but cannot, considering his age, education, and work experience, engage in any other kind of substantial gainful activity which exists in the national economy, regardless of whether such work exists in the immediate area in which he lives, or whether he would be hired if he applied for work. For purposes of the preceding sentence (with respect to any individual), ‘work which exists in the national economy’ means work which exists in significant numbers either in the region where such individual lives or in several regions of the country.”

Consequently, SSA has referred to government labor market and occupational data since the court challenges of the early 1960s. SSA needed the data to arrive at and support its decisions regarding whether a claimant’s impairment is of such severity that it prevents him or her from doing not only his or her past work, but also any other work in the U.S. economy.

20 Kerner v. Fleming, 283 F2d 916 (2d Cir. NY, 1960); Rinaldi v. Ribicoff, 305 F2d 548 (2d Cir. NY, 1962).
For more than 50 years, SSA has been considering occupational information in disability determinations after reaching the conclusion that disability eligibility could not always be decided on medical factors alone. Over the years, SSA has come to rely on the Department of Labor’s *Dictionary of Occupational Titles* (DOT)\(^\text{22}\) as the main source of this occupational information. Although the DOT was not designed specifically for SSA’s disability programs, it came closer to meeting SSA’s legal and programmatic requirements than any other occupational information resource that existed in the 1960s.

SSA used the DOT to such an extent that in the 1960s, the agency contracted with DOL to produce a companion volume to the DOT. This supplement, entitled the Selected Characteristics of Occupations (SCO) provides measures for additional physical demands of work for each of the DOT’s 12,000+ occupations, such as climbing, balancing, reaching, handling, special senses requirements (visual acuity, hearing, etc.), and environmental requirements (noise levels, exposure to cold, etc.). These ratings have been crucial to SSA’s evaluation of how much a claimant can do despite his or her impairment (residual functional capacity) and whether this level of functioning enables the claimant to do his or her past work or any other work. The DOL last updated the SCO in 1991.

**The Sequential Evaluation Process for Determining Disability**

An important point to understand from SSA’s definition of disability is that it embodies a medical-vocational concept. It requires a medical cause (i.e., a “medically determinable physical or mental impairment”) and a directly related vocational consequence (i.e., the “inability to engage in any substantial gainful activity”). As a result, when disability cannot be decided on medical factors alone, SSA’s disability evaluation process relies, fundamentally, on a comparison between what people can do and what jobs require.

To decide whether a claimant is disabled under the 1967 definition of disability, SSA has established an evaluation process that adjudicators at all levels must follow—the sequential evaluation process.\(^\text{23}\) This process invokes SSA’s need for occupational information. In determining disability, SSA considers the following questions sequentially and stops as soon as it reaches a decision:

Step one: Is the claimant currently working and performing “substantial gainful activity”\(^\text{24}\) (SGA)? If yes, he or she is not disabled. Otherwise, go to step two.

\(^\text{22}\) The *Dictionary of Occupational Titles*, US Department of Labor (Revised 4th ed. 1991), available at [http://www.oalj.dol.gov/](http://www.oalj.dol.gov/), is an occupational classification system of jobs in the U.S. economy. The DOT and companion volumes, Selected Characteristics of Occupations and the Revised Handbook for Analyzing Jobs, classify the physical requirements of work for over 12,000 occupations. Occupations are arranged by industry and reflect the main tasks, strength level requirements (ranging from sedentary to very heavy), and skill levels of work.

\(^\text{23}\) 20 CFR 404.1520, 404.1594, 416.920, 416.994. If a claimant already qualifies for benefits and SSA must determine whether his or her disability continues, SSA uses a different sequential evaluation process that includes a medical improvement review standard.

\(^\text{24}\) Id. at 404.1510, 404.1572, 404.1574, 416.910, 416.972, 416.974. Substantial gainful activity (SGA) is work that involves doing significant and productive physical or mental duties and is done for pay or profit. SGA thresholds are different for nonblind and blind claimants. For 2011, the SGA limit for a nonblind individual is $1,000 and for a blind individual $1,640, available at [http://policynet.ba.ssa.gov/poms.nsf?lnx/0410501015](http://policynet.ba.ssa.gov/poms.nsf?lnx/0410501015).
Step two: Does the claimant have an impairment that is severe and meets duration requirements? If no, the person is not disabled. Otherwise, go to step three.

Step three: Does the claimant’s impairment(s) meet (or equal) the criteria in the Listing of Impairments? If yes, the person is disabled. Otherwise, go to step four.

Step four: Is the claimant still able to perform past work? If yes, the person is not disabled. Otherwise, go to step five.

Step five: Is the claimant able to do other work, given his or her residual functional capacity (RFC), age, education, and work experience? If yes, the claimant is not disabled. If no, he or she is disabled.25

The First Three Steps.

While the first three steps of the five-step sequential evaluation process do not require adjudicators to consult occupational references, each of the three steps has a connection to the world of work. At step one, SSA determines whether the claimant is currently working (doing “substantial gainful activity”). At step two, SSA considers the medical severity and duration of the claimant’s impairment(s). Regarding severity, SSA determines whether the impairment(s) prevents the claimant from doing basic work activities. SSA regulations define these activities as “abilities and aptitudes necessary to do most jobs,” and the regulations provide examples:

- Physical functions such as walking, standing, sitting, lifting, carrying, reaching, handling, etc.
- Capacities for seeing, hearing, and speaking.
- Understanding, carrying out, and remembering simple instructions.
- Use of judgment.
- Responding appropriately to supervision, co-workers, etc.
- Dealing with changes in a routine work setting.26

At step three, SSA considers whether the claimant’s impairment(s) meets or equals the criteria cited in the Listing of Impairments.27 The Listing of Impairments describes impairments that SSA considers to be severe enough to prevent a claimant from doing any gainful activity, a stricter standard than “substantial gainful activity” that is applied at steps one, four, and five.

25 Supra at 423(d)(2)(A). The first three steps of the sequential evaluation process do not involve vocational considerations. If a claimant is not working at the SGA level and his or her severe impairment(s) does not meet or equal a listed impairment, the next step is to assess the claimant’s capacity and qualification to perform work. Claimants will be found disabled only if their physical or mental impairments are so severe that they cannot perform their previous work and cannot perform any other substantial gainful work.

26 Id. at 404.1520, 416.920.

27 Id. at 404.1520(d), 404.1525(a), 416.920(d), 416.925(a); Appendix 1 to Subpart P of Part 404 - Listing of Impairments.
Assessment of RFC.

If SSA cannot determine at step three whether a claimant is disabled, it must assess the claimant’s residual functional capacity (RFC) before proceeding to step four. The RFC is the most a claimant can do despite the limitations of his or her impairment(s). SSA assesses RFC based on all relevant medical and other evidence that is in the claimant’s case record.

Assessment of human function is one side of the disability evaluation equation, and the assessment of what is required to do work forms the other side of the equation. The DOT and its companion volume the SCO classify what is physically required, including ratings and measures, for over 12,000 occupations nationwide. To compare a claimant’s RFC with the demands of work cited in the DOT and SCO, SSA developed a physical assessment form (SSA-4734-BK). This form documents a person’s ability to do work-related physical activity in terms of the rating categories cited in the DOT and SCO, e.g., physical demands related to strength (walking, standing, lifting, carrying, etc.) or other physical functions, including postural and manipulative functions (stooping, crouching, reaching, handling, etc.) 28

Connections between the DOT definitions, ratings, and measures of physical demands of work and SSA’s RFC are evident in how SSA assesses physical function, such as strength. For example, the DOT classifies work into five strength levels, with “sedentary” being the lowest and “very heavy” being the highest. SSA’s physical RFC enables SSA adjudicators and medical consultants to rate the most the claimant can do in terms of strength (e.g., lifting, carrying, standing, walking) and other physical functions so that the claimant’s RFC can be compared to his or her past work or to other work as defined in the DOT.

Step four.

At step four, SSA compares a claimant’s RFC with the demands of his or her past work. If the claimant cannot do past work as he or she actually performed it, then SSA must determine if the claimant has the RFC to do the past work as it is generally done in the U.S. economy. When SSA makes this comparison, it often relies on the DOT and SCO for information about the job demands that are relevant to the claimant’s RFC.

Step five.

If the claimant cannot do his or her past work, SSA moves on to step five. At this point, SSA uses the same RFC assessment to decide whether there are other jobs the claimant can do, considering his or her age, education, and work experience. SSA makes this judgment using the DOT and SCO for information about other occupations that may be within the claimant’s RFC and to assess the potential vocational advantages and disadvantages of the claimant’s education and work experience (e.g., acquired skills). SSA’s regulations also permit the use of vocational experts or other specialists, 29 and these experts frequently rely on occupational resources that are

28 Id. at 404.1545, 416.945. SSA rates the abilities of claimants with mental disorders to meet job demands that are not captured in the DOT, such as the ability to understand, remember and carry out instructions, ability to respond appropriately to supervision, co-workers, and work pressures in a work setting.
29 Id. at 404.1566(e), 416.966(e).
also tied to the DOT. SSA’s regulations take administrative notice of “reliable job information available from various governmental and other publications,” including the DOT.  

At step five, SSA adjudicators must consult a set of tables in the Code of Federal Regulations, known as the medical-vocational guidelines, or “the Grid,” to arrive at a decision. The Grid combines certain medical-vocational fact patterns into “rules” that direct a decisional outcome (e.g., either “disabled” or “not disabled”). The Grid provides consistent “rulemaking” or application of case fact patterns regarding RFC and vocational factors to ensure that SSA’s decisions are uniform, not arbitrary and capricious.

The four basic factors that are combined in the Grid include strength level (based on RFC assessment and DOT ratings), age, education, and previous work experience (classified as no work, unskilled work, semi-skilled work, or skilled work). Skills are further categorized as transferrable or not transferable, depending on whether they can be used in other work.

The existence of jobs in the national economy is reflected in the “Decisions” shown in the vocational rules. This is because administrative notice has been taken of the numbers of unskilled jobs that exist throughout the national economy at the various functional levels as supported by the DOT. Therefore, the Grid rules are based on not only DOT constructs (e.g., the definitions of sedentary, light, and medium occupations) and Social Security’s definitions of unskilled, semi-skilled, and skilled work, but also on the number of occupations meeting these definitions in the DOT.

SSA’s vocational guidelines, published in 1978, are based on the DOT. The world of work and SSA’s disability populations have changed significantly since 1978, and SSA’s policies need to be revised to reflect these real world changes. Efforts to update SSA’s vocational policy have been hampered because nearly all of SSA’s policy is tied to the DOT, which is outdated and lacks definitions, measures, and ratings for mental or cognitive demands of work.

SSA needs the data described above to arrive at, and support its decisions regarding whether a claimant’s impairments are of such severity that they prevent him or her from performing not only his or her past work, but also from adjusting to other work in the U.S. economy. At the time that the definition of disability in section 223(d) of the Act was amended, there were few choices available in terms of comprehensive, nationwide, and reasonably current occupational-analysis databases and title taxonomies. Consequently, SSA determined that the DOT came closer to meeting its needs more than any other occupational resource that existed at the time.

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30 Id.
31 Id. at Appendix 2 to Subpart P of Part 404-Medical-Vocational Guidelines.
32 Social Security Ruling 83-46c.
33 Supra at 404.1568, 416.968.
34 Id. at Part 404, Section 200.00(b). The DOT and companion volumes, Selected Characteristics of Occupations and the Revised Handbook for Analyzing Jobs, classify the physical requirements of work for over 12,000 occupations. Occupations are arranged by industry and reflect the main tasks, strength level requirements (ranging from sedentary to very heavy), and skill levels of work.
35 Id. at 204.00. This section addresses a maximum sustained work capability for heavy and very heavy work.
36 Id. at 404.1568, 416.968. In classifying work as unskilled, semi-skilled, and skilled, SSA uses materials published by the Department of Labor.
37 Id. at 404.1545, 404.1560-404.1569a, 416.945, 416.960-416.969a.
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Appendix II – Memorandum on the Review Process for Papers and Publication

September 16, 2008

Memorandum on the Review Process for Papers and Publication

This memorandum documents the review process to be followed prior to publishing research papers authored by staff in the following components: the Office of Program Development and Research (OPDR), the Office of Research, Evaluation and Statistics (ORES), and the Office of Retirement Policy (ORP). It applies to all papers intended for publication except papers submitted to the Perspectives section of the Social Security Bulletin and conference papers, which have their own review processes (see Attachments I and II).

I. Review Process

a. The Associate Commissioner (AC) of the home component of the author or his/her designee initiates a Technical Review of the paper by establishing a review panel of topic-area experts (the experts will be directed to follow the general guidelines in Attachment III for purposes of evaluating papers). The experts will typically be drawn from staff in components within the Office of Retirement and Disability Policy (ORDP), but in some cases panel members may be selected from other components at SSA, other government agencies, or outside the government. One of the experts, will be designated as the Chair of the panel. When providing instructions to the Technical Review panel, the intended publication vehicle (e.g. Social Security Bulletin, Policy Brief, outside journal) should be identified.

b. The Chair will provide initial written comments from panel members to the author within a reasonable period of time (generally within 3 weeks after receiving the paper). If possible, the Chair should work with the review panel to produce a consistent set of comments. If agreement cannot be achieved on major points, the Chair should consult with the AC to resolve differences. The written comments will begin a revise and resubmit process, coordinated by the Chair, that will result in either a favorable report from the panel or written explanations from the panel and/or the author of the disagreements for the AC to resolve.

c. After the Technical Review, the AC determines whether the paper should go forward to SSA Review. During this review, selected Deputy-level components within SSA (OCACT, OLCA, and OCOMM) and the other research AC components in ORDP will be given a two-week period in which to provide comments for the paper. When sending the paper to SSA Review, and informational copy of the paper will also be sent to the Deputy Commissioner and Assistant Deputy Commissioner of ORDP. The author will address, where feasible, the comments from the SSA Review and notify the AC of any outstanding issues, which the AC will work to resolve.

d. After SSA Review, the AC decides whether the paper should be published. Papers will typically be released in Agency publications (after copy editing by the Division of Information Resources in ORES). Papers may be submitted to an outside...
professional journal with AC approval. Papers that appear in professional journals may ultimately be revised and reprinted in the *Social Security Bulletin*.

e. ACs will be involved at various points in the process, including approval to begin the Technical Review, approval to begin SSA Review, and approval to publish, and may require changes to the paper at each stage. ACs, at their discretion, may ask for guidance from senior SSA management or colleagues regarding the publication decision.

f. If the paper is co-authored and the authors reside in separate AC components, all relevant ACs will be involved at major decision points and must agree before a paper can be published.

g. If the paper is co-authored with a researcher outside SSA, the paper must follow the review process as outlined in this document.

II. Discussion

This review and publication process is modeled on the one employed by social science and public policy journals. Professional journals use referees and editors to determine whether the research is of high quality, or said differently, whether the “science is good.” Referees are selected based on their expertise in specific topic areas and provide comments and recommendations regarding the publication decision. Journal editors, who are typically senior professionals in their field of study, make the final publication decision. In the review process described above, the ACs fulfill the role of editors and the Technical Review panel that of the referees. The SSA Review provides an additional “set of eyes” to examine the paper and allows for final feedback on problematic areas of a paper before a publication decision is made. It also alerts the communications and legislative components within the Agency to forthcoming publications.

III. Signatures

Richard Balkus, Associate Commissioner for Program Development and Research
/s/ Richard Balkus

Manuel de la Puente, Associate Commissioner for Research, Evaluation, and Statistics
/s/ Manuel de la Puente

Jason Fichtner, Associate Commissioner for Retirement Policy
/s/ Jason Fichtner
Overview of “Perspectives” Review

Below is a description of the review process for papers submitted to “Perspectives.” All the review stages occur before a paper is sent back to the author for changes. At any stage, a decision not to publish a paper can be made.

Stage 1 – Initial Decision on Worthiness of Paper for Consideration

The Perspectives Editor (PE) reviews papers for technical/subject matter suitability and general clarity. If the PE decides that a paper is worth of consideration for publishing, the PE identifies 3 subject matter experts to serve as referees and sends their names and contact information to the Bulletin’s managing editor (ME). Referees are chosen on the basis of the subject matter expertise and may be SSA employees or non-SSA experts.

When the PE decides that the paper is not suitable for the Bulletin, the PE writes a letter to the author outlining general reason(s) for the decision.

Stage 2 – Technical Review to Determine Whether to Recommend Publishing

The Bulletin’s ME forwards the paper to the 3 referees identified by the PE. All reviews are double blind. The referees’ are responsible for reviewing a paper on its technical merits and determining whether the paper is of sufficient quality, importance, and interest to warrant publication. Referees are given 6 weeks to submit written reports that include a recommendation about the decision to publish. The recommendation decision has 3 options:

1 – Yes, should be published with small changes (identify changes)
2 – Yes, should be published with substantial changes (identify changes)
3 – No, should not be published (identify general reasons why not)

Once the ME receives all three referee reports, they are forwarded to the PE who decides whether to send the paper to the Editorial Review Committee and recommend publication. When technical reviews indicate that the paper cannot be published with reasonable effort, the PE writes a letter to the author outlining the reason(s) for the decision not to publish.

Stage 3 – Editorial Review Committee – Decision to Publish

When the PE recommends a paper for publication, the decision to publish is made by the Editorial Review Committee (ERC). The ORES Associate Commissioner chairs the ERC and appoints up to 3 other members who can vary depending on the paper’s topic.

An ERC review is triggered when the PE forwards a review package to the AC-ORES that contains the original, unrevised manuscript, the full set of referee comments, and a cover letter with the PE’s recommendation and any relevant supplemental comments. The ERC review includes, but is not limited to:
1. Offering advice about expanding or reducing parts of the paper;
2. Identifying concerns about imprecise or inaccurate interpretations of SSA programs or policies;
3. Identifying any politically sensitive aspects of the paper that need to be changed.

Ordinarily, ERC review should be completed within 2 weeks of the ORES-AC receiving the review package.

**If the ERC decides the paper should not be published,** the PE sends a letter to the author outlining the reason(s) for the decision.

**If the ERC decides a paper should be published,** the PE communicates required changes to the author and determines when the revised paper is satisfactory. The paper is then sent to DIR for editing and formatting in consulting with the author.
Timeline & Procedures for Review & Approval of Conference Papers and Presentations

Timeline for Abstract Submissions:

1) Three weeks prior to abstract due date – Proposals due to supervisor, including abstract as well as conference name, dates, location, and any other necessary supporting documentation. Supervisor alerts the relevant component Associate Commissioner within a few days if the proposal seems worthwhile and provides him or her with a copy of the abstract for review. The Associate Commissioner sends the abstract to the other Associate Commissioner as an FYI. If the Associate Commissioner has any other questions about the abstract, set up a discussion with the author(s) and supervisor.

2) One Week prior to abstract due date – Associate Commissioner forwards to Executive Officer for budget review.

3) One to two dates before abstract due date – Abstract Commissioner issues final approval and notification to authors.

Timeline for Conference Papers:

1) A “work-in-progress” OP Seminar is encouraged at an early stage to obtain feedback.

2) Three weeks prior to conference “send out date” – A draft paper is submitted for review. The review is a simultaneous review by the ORDP Technical Review panel and relevant component Associate Commissioner; FYI to other Associate Commissioners. Conference papers do not need to go through SSA Review. They must carry the disclaimer “Preliminary Draft: Do Not Quote or Cite without Permission.” Note that, if not otherwise specified, it is assumed the paper “sent out” date is 1-week before the start of the conference.

3) One Week prior to send out date – Edits/suggestions as a result of the simultaneous review are sent to authors and copy those involved in the simultaneous review.

4) Two to three days prior to send out date – Authors provide corrected/edited papers for final AC approval. If issues still remain unresolved at this stage, it might be helpful to have a meeting with the relevant people involved to resolve any remaining issues.

5) A dry run of the presentation is recommended.

6) Within a month after the conference, the author(s), in consultation with supervisor(s) and Associate Commissioner(s), will determine the appropriate outcome of the project (e.g. Bulletin article, journal submission, etc.). If the paper is to be published by SSA or in an outside journal, the paper should go through the revise and resubmit process within
ORDP and SSA Review. A paper may be published in conference proceedings without additional ORDP or SSA Review if the AC specifically approves.

Some discretion and flexibility will have to be made for some conference abstracts or papers. These will be handled on a case by case basis in consultation with the author(s), supervisor(s), and Associate Commissioner(s).

There are additional requirements if the conference involves international travel, either to be approved as part of the annual International Travel Plan or to be approved through a decision memorandum from the Deputy Commissioner to the Chief of Staff.
Attachment III

Guidance for Peer Review of ORDP Research/Policy Analysis Papers

Introduction

The aim of this document is to provide guidance to those who have been asked to serve on review panels for papers intended for release to the public in professional journals, conference proceedings, working papers, etc, or for presentation. This guidance gives some direction for assessing papers. It is not intended to be exhaustive or to be applicable to each paper. Thus, reviewers are expected to use the guidance as appropriate and as relevant to the document under review.

The scope of the review includes: scientific merit and relevance, technical adequacy, methodology, logic, and clarity of arguments, data interpretation and conclusions drawn from the analysis, and research implications.

Guidance

Scientific Merit and Relevance

- Does the research paper address a research problem or issue that is relevant to SSA programs?
- Is the statement of the research problem convincing and compelling?

Technical Adequacy

- Does the paper have components that are widely expected in a good research paper? (Statement of problem, discussion of research question/issue, clear explanation of methodology and data, clear and concise presentation of results, etc.)
- Does the paper provide a review of the literature that is appropriate for the analysis?
- Are data used in the analysis appropriate given the research problem?
- Are data limitations clearly discussed?
- Where relevant, is the choice of a sub-sample to be analyzed clearly described and justified?
- Is the choice of variables explained?
- Are there concerns about the choice of variables (e.g. inclusion or exclusion of variables, how defined) or model specification?
- Is statistical significance testing or other statistical measured used appropriately?
- Are statistical measures explained and references appropriately throughout the paper?
- Are there any data disclosure issues?
- Are references included?
- Are there any numerical errors, erroneous information, or inconsistencies with other published statistics that you are familiar with?
- Is the paper written at an appropriate level for the intended audience?

Methodology

- Is the methodology appropriate for addressing the research question(s)?
➢ Is the methodology explained in sufficient detail?
➢ Is the discussion of the methods clear and concise?

Logic and Clarity of Arguments

➢ Is the aim of the paper clearly stated up front?
➢ Are tables, graphs, and charts clear, including the title, row and column labels, legends, footnotes, ability to read graphs in black and white?
➢ If appropriate, do tables and charts clearly indicate statistical significance and other statistical measures?
➢ Is the paper well organized?
➢ Is the paper too detailed or not detailed enough?

Data Interpretation and Conclusions

➢ Is the presentation of the results aligned with data presented in tables and graphs?
➢ Do conclusions follow logically from the results?
➢ Are results interpreted in a reasonable fashion?
➢ Are speculations concerning results reasonable?
➢ Is the discussion of research results focused on the research questions?
➢ Are the main conclusions clearly stated?

Implications of Data

➢ Are research results expressed in a manner that is clearly linked to SSA Programs and issues?
➢ Is the presentation of research implications clear and concise?
➢ Is the discussion of research implications appropriate given the results?
➢ Did the research touch on any area that you think could be sensitive or controversial for the Agency and thus needs to be flagged for upper management review?

Additional Points to Keep in Mind

1) Reviewers should document their feedback to the analyst in an e-mail so that these documents can be forwarded to the AC with the final version of the paper for clearance.
2) The person designated as the lead reviewer should take responsibility for coordinating feedback from the other panel members.
3) Reviewers are expected to work with analysts to ensure that feedback is understood.
4) The review panel should review revisions to ensure that comments are appropriately addressed.
5) The review panel should document any unresolved differences with authors in an e-mail to the AC.
Appendix III – List of Acronyms

ALJ – Administrative Law Judges
APA – Administrative Procedure Act
BLS – Bureau of Labor Statistics
DCI – Data Collection Instrument
DDS – Disability Determination Services
DI – Disability Insurance
DOT – Dictionary of Occupational Titles
FY – Fiscal Year
IQA – Information Quality Act
O*NET – Occupational Information Network
ODAR – Office of Disability Adjudication and Review
OGC – Office of General Counsel
OIDAP – Occupational Information Development Advisory Panel
OIS – Occupational Information System
OISD – Occupational Information systems Development
OMB – Office of Management and Budget
OVRD – Office of Vocational Resources Development
PRA – Paper Reduction Act
R&D – Research and Development
RFC – Residual Functional Capacity
SCO – Selected Characteristics of Occupations
SGA – Substantial Gainful Activity
SOC – Standard Occupational Classification
SSA – Social Security Administration
SSI – Supplemental Security Income
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