

December 28, 2020

Data Quality Record for Long-Term Performance Goals

Long-Term Performance Goal Text: Increase the number of research products meeting customer needs.

Goal Number/Objective: Goal 3: Rule of Law and Process/Objective 3.3: Prioritize Robust Science

NPM Lead: Office of Research and Development (ORD)

1a. Purpose of Long-Term Performance Goal:

This performance goal will allow the Agency to gauge its success in developing and translating research products that support Agency programs. We are measuring whether a research product meets our customers' needs in terms of three criteria: quality, usability, and timeliness. A positive trend will demonstrate an increased capacity to develop products that are relevant in environmental and regulatory decision-making, consistent with Agency priorities.

1b. Performance Goal Term Definitions:

- **Quality** - The extent to which a research product meets scientific and technical standards, is rigorous and transparent, and advances the state of knowledge for a particular topic. A product is high quality if:
 1. It was developed in accordance with ORD science and data policies, including but not limited to quality assurance and peer review.
 2. It is peer reviewed and published by the broader scientific community.
 3. Is sufficiently rigorous and transparent to support EPA regulatory and non-regulatory work.
- **Usability** – The degree to which a research product is suited for and easily applied to actions within EPA's mission. A product is highly usable if:
 1. It provides information relevant to customer decisions or actions. The product informs the Agency and partners on scientific uncertainties, risk interpretations and future data needs.
 2. The product, along with key data and source material, are readily accessible to the intended audience.
 3. Sufficient engagement and support are provided to the intended customer to allow for full applicability.
- **Timeliness** – Whether a product is delivered within a timeframe appropriate for customer use. A product is considered timely if:
 1. The anticipated product delivery date is determined considering customer use expectations.
 2. It is delivered by the anticipated delivery date.
- **Product** – A product is a deliverable that results from a specific research project or task and is meant for use by an ORD customer. This can include one of many scientific deliverables. These include journal articles, Agency reports, software tools, databases, and more.
- **Customer** – Customers are key users of ORD research products whom were closely engaged during product development and delivery. ORD's customers include individuals working in federal and non-federal positions such as EPA program offices and regions, partner agencies, and the states.

1c. Unit of Measure: Number (count) of research products meeting customer needs.

2a. Data Source:

- Products that are evaluated are selected from those listed in ORD's Research Approval Planning Implementation Dashboard (RAPID), which is an information collection and sharing system that is integrated with other ORD information systems, and captures what ORD plans to produce and assist researchers in tracking journal articles, assessments, tools/models, reports, and other products that ORD develops. Each year, a randomly selected sample of products that are listed in this database will be

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evaluated through the long-term performance goal evaluation framework. The total population of products is ~200 per year on average and the selected sample size is 50. Data for the products listed in this system is stored in RAPID and will be gathered through a partner survey (which is described further in the Methodology section). For a given fiscal year's reporting cycle, products from the prior year are evaluated (meaning FY21 reporting includes products delivered in FY20).

- Product-level data is reported by the Centers that are responsible for the development of these products.
- Data that is reported on an annual basis through End of Year Reporting will be aggregated at the annual level (i.e. "The number of products produced in FYXX that meet customer needs").
- Representatives from ORD's research centers participate in a data QA and review process each year throughout the evaluation cycle to support annual reporting.

2b. Data needed for interpretation of (calculated) Performance Result:

- Through a pilot study followed by a full evaluation round conducted in FY18, ORD determined a baseline for the Long-term performance goal. Targets for subsequent years were set based on a gradual glide path increase for performance results.
- Results are reported annually at the Agency level.
- The full universe of products includes all deliverables that are listed in RAPID, see above for details on the database.

3. Methodology:

The performance result is calculated using a series of indicators that branch off each of the three components of the long-term performance goal (quality, usability, and timeliness). These indicators outline how well the product fulfills these three qualities. Each of the indicators are weighted and scored so that the sum of all indicators equals 100. Each product, then, will be scored by ORD evaluation staff on a 100-point scale. This 100-point scale is calculated as follows: 30 points for product quality, 50 points for usability, and 20 points for timeliness. A product is determined to "meet customer needs" if its score exceeds a minimum acceptable threshold established by ORD leadership, set at 85 points. The number of products that meet customer needs is the sum of products that are scored greater than or equal to 85 out of 100.

Data that feed this scale are collected from two main sources: internal to ORD data collection and partner surveys. The internal data collected for each product fulfills most data requirements for the indicators for quality and timeliness scores. This includes product completion and delivery dates relative to ORD expectations and peer review and technical clearance information. The usability score (and some quality and timeliness) data is collected via partner surveys. Usability related questions address whether the product is properly translated and explanatory, quality questions address the scientific rigor of the products, and timeliness questions address the delivery of products relative to customer needs. The partner surveys are distributed to known users of the products via an online tool. The survey includes questions regarding the user's opinions about the product's overall usability and other characteristics that can inform a determination regarding the product's relevance to the customer's needs. 70 of the 100 points for the product score are derived from questions related to the survey.

4. Data Limitations/Qualifications:

This performance goal was designed and piloted on a small sample (16) products in early FY18 and was expanded to support data collection for ORD's FY18 end of year reporting. EPA received ICR approval from OMB to include additional non-federal customers in the survey in FY20.

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5. Technical Contact:

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6. Certification Statement/Signature

I certify the information in this DQR is complete and accurate.

DAA Signature  Date 1/8/2021