

Process for Adding New Products to LANCE

An incoming request for a product enhancement generally comes from a user, or a LANCE UWG member, representing a broader user community. If the request is considered feasible by the LANCE Element and LANCE Manager, then an Enhancement Request is submitted to the UWG using the template (below). The LANCE UWG consider the request and make a recommendation to ESDIS, who have the final decision on whether the products is added. This document describes what needs to be included in the enhancement request. For NRT versions of standard products the process is straight forward. For applications products, [there are additional requirements \(outlined below\)](#).

Background

When LANCE was initiated it focused on producing Near Real-Time (NRT) versions of standard products from the MODIS, AIRS and AMSR-E instruments. As LANCE evolved these expanded to include expedited products from MLS and OMI and subsequently AMSR-2, MISR, MOPITT, OMPS, VIIRS. The expedited products were added to LANCE after the release of the standard product with guidance from the PI / Science Team. With the addition of AMSR2 this changed and for the first time the expedited products were released ahead of the standard products. In addition to the initial expedited products, the applications community has requested a number of additional products to better serve the applications community.

Mechanism for adding NRT versions of standard products to LANCE

1. **Overview** - *describe the purpose of the suggested enhancement*
2. **Identify and summarize the effort**
 - a. who is requesting the effort (user)
 - b. who is completing the effort (provider)
 - c. who is the NASA HQ or Science sponsor?
3. **Scientific and/or application objective achieved through the enhancement?**
 - a. Say how this enhancement will improve science or how it will be used for NRT applications?
4. **Concept of Operations**
 - a. Location of functionality (e.g. the functionality will be co-located with LANCE MODIS)
 - b. Briefly describe the process for development, integration and testing
 - c. Provide an estimate of required support (FTEs) for development and sustaining engineering
 - d. What is the plan for approving the final product?
5. **Notional Schedule**
 - a. When will the work start? How long will it take to complete the work?
6. **Cost implications?**
 - a. What is the cost of the change?
7. **Endorsements** - include at least 2 emails of support from users, and a letter of support from NASA HQ or science sponsor.

Mechanism for adding applications products to LANCE

For products that do not have a standard product equivalent, applications products need to be mature, validated and documented so that users understand the strengths and limitations of an applications product and can easily find information about appropriate use. The proposed approach for approving applied products is similar to the model for getting new Standard Science Team products into LANCE. As Science Team validation and ATBD documentation will be missing, suitable alternatives need to be found. This might vary slightly according to each product proposed but in general the enhancement request should contain the following:

- Benefit: Scientific objective and/or application objective achieved through the enhancement
- Product Documentation e.g. peer reviewed paper describing the product, the algorithm, the processing, the level of validation
- Effort: A summary of the effort, support required and source of funding
- NASA HQ or Science sponsor providing commitment to support QA and maintenance of the product within LANCE.
- Level of validation achieved (equivalent of CEOS Level 2 validation^[1])
- Endorsement of request from users
- Plan for maintaining the product^[2]

Outline of Enhancement Request

1. **Overview** - *describe the purpose of the suggested enhancement*
2. **Identify and summarize the effort**
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3. **Scientific and/or application objective achieved through the enhancement?**
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4. **Concept of Operations**
 - a. Location of functionality (e.g. the functionality will be co-located with LANCE MODIS)
 - b. Briefly describe the process for development, integration and testing
 - c. Provide an estimate of required support (FTEs) for development and sustaining engineering
 - d. What is the plan for approving the final product?
5. **Notional Schedule**
 - a. When will the work start? How long will it take to complete the work?
6. **Cost implications?**
 - a. What is the cost?
 - b. What is the source of funding
7. **Documentation**
 - a. in the absence of an ATBD what documentation is available for the user?

- b. what level of validation has been achieved?
 - c. document peer reviewed paper(s) that describe the applications product?
 - 8. **Product maintenance**
 - a. Who would maintain the product (QA) and answer user questions?
 - 9. **Endorsements** - include at least 2 emails of support from users, and a letter of support from NASA HQ or science sponsor.
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[1] Level 2 Validation from CEOS Working Group on Calibration and Validation (Land sub group) (<http://lpvs.gsfc.nasa.gov/>): Product accuracy is estimated over a significant set of locations and time periods by comparison with reference in situ or other suitable reference data. Spatial and temporal consistency of the product and consistency with similar products has been evaluated over globally representative locations and time periods. Results are published in the peer-reviewed literature.

[2] Product maintenance would need to be done through NASA HQ or Science Team funding. It is estimated (ball-park) that the cost of maintaining a product approximately \$30-40K per year (equivalent to 2 calendar months per year of a FT scientist inc. overhead).

Related articles

Previous enhancement requests - *to be added*

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