

Desirable Features of a National Cancer Informatics Program

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NCAB IWG roles

1. Program and project reviews of ongoing (mostly caBIG) informatics initiatives of NCI, ordered by contract expiration dates.
2. Concept reviews (cf. BSA) for new proposed informatics projects
3. Assist with development of the new National Cancer Informatics Program (NCIP)
4. Monitor and advise NCI on NCIP implementation and progress

Current IWG project review criteria (10)

1. Does the activity, application or resource meet a well-articulated and attainable need of basic, translational or clinical researchers or cancer health care (ie., is there a 'driving biological or clinical project')?
2. How will success or failure be evaluated? Analogous to stopping rules for clinical protocols, what will be the stopping rules for ending the project if it either fails to meet its technical objectives or fails to be adopted even if technically successful?

IWG project review criteria (10)

3. Will the activity, resource, or application, if successful, make some objectively measurable incremental progress toward overall NCIP goals? Will it enable data sharing and make use of and/or enhance open international standards for research?
4. Is the activity, resource or application designed to anticipate change in a rapidly expanding knowledge base of science and practice? Flexibility and generalizability are important characteristics for longevity in an era of agile science.

IWG project review criteria (10)

5. Is the intended output of the project achievable in the time frame and budget proposed?
6. Will the output of the project be broadly implementable by organizations of varying size and sophistication?
Will it be used broadly by organizations and institutions outside of NCI/Cancer Centers (e.g. other NIH centers or academic research organizations)?

IWG project review criteria (10)

7. Is there a documented plan for long term maintenance, enhancement and fiscal sustainability of the activity, application or resource and its user base?
8. What is the user base and has there been a stakeholder assessment to assure that the activity, application or resource will indeed meet a currently unmet need or a reasonably anticipated future need?

IWG project review criteria (10)

9. Is the project generalizable and likely to create value or address broad needs across the community of cancer researchers? Or would this activity, resource or application be perceived as a “pet project” of an “in” group?
10. Does the activity, resource or application have enough market value to gain adoption without incentives, or if financial or policy incentives are required, are they justified?

The current “sense” of the IWG

- Federal science agencies (NCI included) are at their best when supporting standards development and recognizing informatics and science innovations arising in basic, translational and clinical science
- Particularly for discovery science, supporting the maturation, ‘hardening’ and dissemination of new analytical apps has been successful

The “sense” of the IWG, cont’d

- *Ab initio* commissioning of entirely new applications (particularly enterprise level software) is fraught with technical and program management difficulties.
 - Few if any successes in the past and no current reason to believe the future will be different.

Three desirable features for an NCIP

1. Each project or activity measurably contributes to the advancement of cancer science and/or cancer care and is held accountable using that metric
2. Administrative agility: Fast when it needs to be (e.g., recognizing important innovations in methods, technologies, new knowledge) and slow when it should be (e.g., community consensus on standards)
3. Ongoing program assessment by TBD independent unbiased (third party) mechanism(s)