Guidelines and Evaluation Criteria for Technology Development

(Applied to Genomics and Proteomics Research)

Competition

October, 2006

GenomeCanada

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Genome Canada is a not-for-profit corporation dedicated to developing and implementing a national strategy in genomics and proteomics research for the benefit of all Canadians. By means of **investments totalling $600 million** to date from the Government of Canada, Genome Canada has become the primary funding and information resource relating to genomics and proteomics in Canada and has established six Genome Centres across the country (Altantic, Québec, Ontario, Prairie, Alberta, and British Columbia).

1 OBJECTIVES OF GENOME CANADA

The overriding objective of Genome Canada is to support genomics and proteomics research to enable Canada to become a world leader in selected sectors that are of strategic importance to this country, such as health, agriculture, environment, forestry and fisheries.

In order to accomplish this objective, Genome Canada will:

1. Bring together industry, governments, universities, hospitals, research institutes and the public in support of the national genomics and proteomics research program.

2. Through six Genome Centres across Canada, provide leading-edge technologies to researchers and cross-disciplinary training of the necessary workforce in all genomics and proteomics-related fields.

3. Support large-scale genomics and proteomics projects that draw on existing Canadian strengths and expertise, and whose scale and scope are such that they cannot currently be funded at internationally competitive levels, through other existing mechanisms.

4. Put in place research infrastructure to support the major science and technology platforms (S&T platforms) essential for the large-scale projects including, but not limited to, functional genomics, proteomics, sequencing, genotyping, bioinformatics and new technology development.

5. Ensure leadership in ethical, environmental, economic, legal and social issues related to genomics and proteomics research (GE^3LS).

6. Effectively communicate the results of genomics and proteomics research to the public, thereby helping Canadians to understand the relative risks and rewards of this type of research.

7. Foster Canadian participation in international genomics and proteomics research programs.

8. Encourage investment in genomics and proteomics research by others.

9. Create and realize economic, industrial and social benefits for Canada.

2 BACKGROUND

Six Genome Centres, (British Columbia, Alberta, Prairie, Ontario, Québec, and Atlantic), are established in Canada. The Centres have as their foundation, large-scale research projects and S&T platforms approved in four national competitions. **Contact information for each Centre is presented in Appendix A.**

Genome Canada has funded **114 large-scale** research projects and S&T platforms with a total investment to date of over **$1.4 billion** with partner funding. A list of large-scale projects and S&T platforms approved for funding in each Centre is available on Genome Canada's web site at **www.genomecanada.ca**.

The nature of genomics and proteomics research is that it is as much technology-driven as it is hypothesis-driven. New tools and technologies are essential to advancing genomics and proteomics research, a discipline that is data-rich and multidisciplinary. In order to foster development of new technologies that are applicable to genomics and proteomics research, Genome Canada is calling a new competition. The aim of the competition is to develop new technologies, and adapt technologies used in other disciplines and apply them to genomics and proteomics research. This competition will be interdisciplinary and the involvement of non-life scientists such as engineers, mathematicians and physical scientists is encouraged.

3 TECHNOLOGY DEVELOPMENT COMPETITION

Genome Canada is currently finalizing its submission to the Federal government for funding approval. Although there is currently no dedicated funding for the Technology Development Competition, it is being initiated now in anticipation of Genome Canada receiving new funding in fiscal year 2007/8 (FY07/08). This will allow excellent technology development projects to begin as soon as possible once additional funding is secured.

Genome Canada will not call for full proposals until such time that Genome Canada receives new funding.

Genome Canada will accept applications from Genome Centres for **technology development projects in genomics, proteomics, or related areas,** for a maximum of two (2) years in duration with a minimum budget of $500,000 total. Therefore, it is expected in this competition that the scale of projects will not be the same as previous Genome Canada-funded projects. In order to maximize the effectiveness of Genome Canada to advance genomics and proteomics research in Canada, it may be desirable to provide opportunities for sharing of resources and expertise among Centres. It is possible that technology development projects from one Centre may require the S&T platforms available in other Centres. It is also possible that applicants from across Canada, and from other countries, may collaborate on technology development projects, sharing technology, knowledge, GE^3LS expertise and resources. Genome Canada will strongly encourage and support such arrangements, where desirable and feasible.

3.1 Scope of Competition

The term “technology” denotes methods and tools that enable research including, but not limited to, instrumentation and/or devices, techniques, and software. The purpose of this competition is to develop new and improved technology that is broadly applicable to genomics, proteomics, or related areas. Significant emphasis should be placed on the ease with which newly developed technologies can be made accessible for potential application within 6-12 months upon completion of the project. Proposals can be transdisciplinary or interdisciplinary, involving applicants from various fields, including but not limited to, engineering, mathematics, biophysics, biochemistry, chemistry, biology, statistics, software developers, computational bioscience, economics, humanities and social sciences. Novel, even revolutionary approaches are encouraged. In addition, nationally based projects and those establishing international linkages are also encouraged.

This competition will NOT support the creation or sustainment of databases, individual reagents and collections of reagents, and biological repositories.

3.2 GE^{3}LS Issues

All applicants must consider the ethical, environmental, economic, legal and social (GE^{3}LS) aspects of their technology development project and, where appropriate, seek advice from one or more GE^{3}LS experts (as a co-applicant, collaborator, or through membership on an advisory committee) to develop a plan to address those GE^{3}LS issues directly raised by the proposed technology development project.

3.3 Social and/or Economic Benefits for Canada

Applications must include a proposal for the transfer, dissemination, use or commercialisation (as appropriate) of any inventions derived from the proposed technology development project. A clear commercialization process, which includes IP management and ownership, technology transfer and benefit sharing, must be defined and included in the full application. In anticipation of a successful outcome, the Genome Centre, potential host organization(s) and co-funding partner(s) should outline general terms that deal with the sharing of future benefits (e.g., equity, royalties, and repayment options, etc.) commensurate with the contributions of the respective parties. The plan must also describe how any new technology developed will be made accessible to any or all of Genome Canada-funded Science and Technology Platforms through a no-cost non-exclusive license. The plan should demonstrate how any technology developed would contribute to job creation and economic growth in Canada and their impact on society, quality of life, health, and the environment, as well as the creation of new policies in these areas. The commercialization process and technology access plan will be assessed during the due diligence/peer review process.

4 APPLICATION AND EVALUATION PROCEDURES

4.1 Requests for Support of Technology Development Projects

Requests for support of technology development projects must be submitted to Genome Canada through a Genome Centre.

Eligible applicants, including those from industry[1], academic institutions, research institutes and government laboratories[2], interested in submitting applications for technology development projects must first contact one of the six Genome Centres (see Appendix A). It is the responsibility of the Centre to determine which technology development projects to put forward. For those that are put forward, the Centre must ensure each satisfies Genome Canada's evaluation criteria as defined in Appendix B.

If, at any time during the review process, it is determined that a proposal does not satisfy the evaluation criteria as defined in Appendix B, Genome Canada will NOT submit the proposal to due diligence/peer review process.

[1] Scientists working in Industry may be co-applicants but may not receive Genome Canada funds.
[2] Scientists working in Federal laboratories may be co-applicants on an application but may not receive Genome Canada funds. Funding for activities to be carried out in a Federal laboratory must come from other sources, with the exception of costs that are incurred based on a reasonable fee-for-service arrangement or contract.

4.2 Requirement for S&T Platforms

Each application for support of a technology development project must include a detailed description of all technology services that will be required from outside sources including the Genome Canada-funded S&T Platforms. Genome Canada-supported S&T platforms (see **www.genomecanada.ca** for list of funded platforms) are established to provide genomics, proteomics, and bioinformatics technologies and expertise to the scientific community with minimal duplication of effort across the country. It is the responsibility of the Genome Centre, in collaboration with Genome Canada's Director of S&T Platforms, to work with the leaders of the technology development projects to determine the technologies required and how best to satisfy these requirements through use of the S&T platforms. The request for services must be described in the technology development project proposal, as well as on the *Services from S&T Platforms* sheet in the budget form. The application must include a request for services quote from the S&T Platform administration in support of the request, including a description of the service(s) to be provided, unit costs, number of units required, personnel requirements, data analysis requirements, etc.

4.3 Genome Canada Time Lines

Requests for support of technology development projects must be submitted to Genome Canada through a Genome Centre. Please note that each Genome Centre will have its own time line. Important dates in a Centre's time line will be on or before the Genome Canada dates outlined below. Contact the Genome Centres for their time lines.

October 1, 2006	Guidelines published on web
February 1, 2007	Letters of Intent receipt date
February/March 2007	**Review of LOIs**

(WHEN FUNDS WILL BE SECURED IN FISCAL YEAR 2007/8 THEN THE FOLLOWING APPROXIMATE TIMELINE WILL BE FOLLOWED)

April 2007	Invite full applications
June 2007	Receipt of full applications
August 2007	Combined due diligence/peer review process
September 2007	Board decision on funding
September 2007	Notification of decision

4.4 Letters of Intent- February 1, 2007

By **February 1**, **2007** each Genome Centre must submit Letters of Intent (LOI) for funding to Genome Canada. Each LOI must be submitted on the form available at **www.genomecanada.ca**.

LOIs submitted to Genome Canada in the absence of the support of one of the Genome Centres, (i.e., signature of the President & CEO) will NOT be accepted by Genome Canada.

It is the responsibility of each Genome Centre to undertake an initial review of eligibility of each LOI, based on Genome Canada's evaluation criteria as described in Appendix B.

Once all LOIs have been received by Genome Canada, it will, with the help of external experts, review the LOIs for eligibility and potential areas of synergy between applications. If it is determined at the LOI stage that a proposed technology development project does not satisfy Genome Canada's evaluation criteria a full application will NOT be invited. Following the decision on LOIs applicants will receive written comments. If synergies exist between two or more eligible LOIs, Genome Canada will direct applicants to work together when full proposals are solicited.

The LOI process will also provide guidance to Genome Canada in the selection of reviewers for the peer review process.

4.5 Invite Full Application – Tentatively April 2007

When Genome Canada receives new funding, then an application for funding of a technology development project must be received from the Genome Centre by Genome Canada tentatively on or before **the announced deadline for receipt of full applications.** The application must be presented on the form to be made available at **www.genomecanada.ca** and must address the evaluation criteria described in Appendix B.

4.6 Combined Due Diligence/Peer Review Process

A multidisciplinary panel of international scientific experts, including financial and management experts, will meet in August 2007 to review the full applications. The original LOI application and any written comments on that LOI will be made to the panel for this review. The panel will evaluate each application taking into consideration the evaluation criteria presented in Appendix B.

Applications with a total budget of $2M or greater may require a face-to-face interview during the due diligence/peer review process.

The review panel will offer recommendations and advice, including budget recommendations, to the Board of Directors of Genome Canada. The Board of Directors will make the final decision on funding for each technology development project proposal in September 2007. Following the decision, applicants will be provided with a written evaluation of the strengths and weaknesses of their application and the decision of the Board.

Genome Canada may adjust the evaluation process where warranted by the complexity of the proposals or other relevant factors. **Any adjustments will be rapidly communicated through Genome Canada's website and through the Genome Centres.**

5 TECHNOLOGY DEVELOPMENT ADVISORY BOARD

For technology development projects with a total budget of less than $2M, Genome Canada will require applicants to describe how they plan to seek outside expert advice, including those from technology development experts such as engineers and end-users.

Technology development projects with a total budget of $2M or greater will require a formal Technology Development Advisory Board to provide advice and guidance to the technology development team. The Technology Development Advisory Board must include at least one expert with technology development experience such as an engineer and one end-user. It is the responsibility of the Genome Centres to ensure that Technology Development Advisory Boards are constituted in such a manner that they are sufficiently independent of the technology development team and able to provide informed and critical advice to the applicants.

6 FUNDING

Genome Canada will fund up to 50% of approved eligible costs for new or incremental technology development activities that are an integral part of the Genome Canada approved technology development project. Applicants must assist their Genome Centre in the process of securing the remaining 50% of the funding from other sources.

6.1 Eligible Costs

Eligible costs are defined as reasonable and incremental costs for items that directly support the objectives of the Genome Canada approved technology development project. Budgets must **NOT** include items for which funding has already been approved from other sources, unless the request for funding was specifically made to support the Genome Canada project and meets all other eligibility criteria.

Eligible costs may include the following:

i. Salaries:
   - salaries and benefits for the technology and development team members (note that salaries of researchers or senior management who are currently funded by their respective organizations are **not** considered eligible costs)
   - the actual cost of release time from teaching, if supported by a letter from the host institution;

ii. operating costs;

iii. costs related to the general maintenance of research infrastructure, to be used for carrying out the proposed technology development project;

iv. support for research into GE^{3}LS aspects of the technology development project;

v. costs related to the development and implementation of the plan to realize social and/or economic benefits for Canada;

vi. costs for the communications and public outreach activities related to the project;

vii. research infrastructure within Canada. As defined in the *Funding Agreement between Genome Canada and the Government of Canada*, research infrastructure means equipment, specimens, scientific collections, computer hardware or software, information databases, communications linkages and intangible property used or to be used primarily for carrying on the technology development project, including housing and installations essential for the use and servicing of the items listed above. This includes reasonable rental and renovation costs for existing buildings and facilities, or costs for new buildings and facilities, essential for the use of those items listed above. The opportunity cost of using existing infrastructure may **not** be included as an eligible cost;

viii. reasonable and low administrative costs (including project-related costs of developing and fostering partnerships and relationships between the Genome Centre and host organization, which are to be managed by the Genome Centre). Administrative costs must not exceed five percent (5%) of the budget (calculated as total budget less admin. costs). Note that salaries for project management are eligible costs under (i) above; and

ix. inflation rate costs:

- inflation for salaries, not to exceed two percent (2%) of total salary and benefits, for salary expenditures in year 2 of the project;
- note that inflation rate cannot be applied to consumables, equipment, general & administrative or services from S&T platforms.

Payments to foreign persons, for example investigators' salaries, are not considered eligible costs for Genome Canada, however, costs that are incurred based on a reasonable fee-for-service arrangement or contract are considered eligible.

6.2 Co-funding

Genome Canada requires that at least 50% of the requested funding for eligible costs must be obtained through co-funding from other sources. Due to the compressed timeline between submission of full applications and the anticipated decisions on funding, as well as the desire to release funds to technology development projects quickly, a co-funding plan must be provided, which includes a firm commitment for at least 75% of the co-funding for eligible costs of the project and a well-developed and feasible plan for securing the remaining 25% of co-funding.

In order to encourage greater opportunities for knowledge generation and training in Canada this competition will require a minimum of 50% of co-funding from partners to be invested in Canada.

The full application must include complete documentation for secured or proposed co-funding. Examples of appropriate documentation include:

- Written confirmation, for example a letter or a copy of an agreement from the co-funding source, committing funds. Acknowledgement of the use of these funds to co-fund the Genome Canada project must also be included.
- For co-funding from a funding agency, a copy of the full application, project summary, detailed budget and notice of award (if applicable). Note that documentation must clearly demonstrate that funding is being used for eligible costs included in the budget of the Genome Canada approved project. A written confirmation from the funding agency that they acknowledge use of these funds to co-fund the Genome Canada project is also required.
- For co-funding from an industry source:
    - a copy of a Board resolution specifying the company's level and terms of commitment
    - provide documentation to support the financial viability of the company and its ability to fulfill its commitment to the project (e.g., a cash flow statement, a recent audited financial statement, a press release announcing significant new funding, etc.)
- For in-kind contributions: a clear rationale and calculation of how the value was determined (including documentation to support all assumptions, price lists, discount policy, quotes from suppliers, letters supporting same, etc.). All in-kind contributions must be auditable by outside experts.

6.2.1 Eligible Co-funding

i. Co-funding must be applied for on or after October 1, 2006 to be eligible for costs specifically requested in the Genome Canada budget in order to be eligible for the purpose of this competition. Eligible expenses will only be recognized up to six (6) months prior to a Notice of Award.

ii. Genome Canada considers any of the following possible co-funding sources, which may be Canadian or foreign, as acceptable:

- Institutional funds, trust funds, or foundations
- Departments and agencies of the federal government. There are exceptions. The following agencies are **NOT** considered as eligible co-funding sources: Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council, Social Sciences and Humanities Research Council, and tri-council programs (e.g., the Networks of Centres of Excellence and the Canada Research Chairs)
- Departments and agencies of provincial and municipal governments
- Firms and corporations
- Voluntary organizations
- Individuals
- Venture capital or other investment funds.

iii. Cash contributions as co-funding are preferred. However, in-kind contributions, defined as non-cash eligible budget items, which can be given a cash value, may be considered as co-funding if:

- the value can be reasonably determined and supported by documentation;
- the expenditure represents an item that would otherwise have to be acquired with cash; however, this excludes the cost of pre-existing facilities or equipment (i.e., budgets cannot include the opportunity cost of space or equipment);
- In the case of supplier discounts, amounts will be considered as eligible co-funding if:
    - The amount is above and beyond the standard industry or academic discount taking into account any large volume discounts; and
    - The amount can be supported by documentation from the supplier's head office (i.e., a letter from a sales representative will not be acceptable).

iv. The value of previously existing IP transferred to a project is NOT considered eligible co-funding unless it is a contribution by a supplier of IP (e.g., software license that would otherwise have to be acquired from a third party supplier). Such items must be supported by appropriate documentation from the supplier's head office.

7 ADMINISTRATION

7.1 Conditions for Release of Genome Canada Funds

The following are the minimum requirements to allow for the disbursement of Genome Canada's quarterly contributions:

i. Signed agreement between Genome Canada and the Genome Centre.

ii. Signed agreements (or MOUs) between the Genome Centre, the lead organization, the applicants and the co-funding partners that establishes the resolution of major areas, such as, contributions, IP ownership and management, data release, a commercialization process, project management, the role of the SAB, funding term, termination policy, financial policies, etc. The agreements or MOUs must be in compliance with the agreement between Genome Canada, the Genome Centre, and third party funders, if applicable.

iii. Signed statement from the Genome Centre CEO confirming that all requirements have been met and funds will flow to the project upon receipt of funds from Genome Canada.

iv. Revised budget and milestones, in accordance with the recommendations of the review panel as approved by the Board of Directors of Genome Canada.

v. Appropriate certification for technology development projects involving human subjects, human stem cells, animals, biohazards, radioactive materials or possible effects on the environment.

vi. A clearly defined policy and plan for sharing of technology developed by the project and publication of results.

vii. Secured co-funding amounting to a minimum of 75% of the co-funding for eligible costs.

viii. Meet other conditions that may be set by the Board of Directors of Genome Canada.

7.2 Project Readiness

All applicants must demonstrate that they will be in a position to receive Genome Canada funding within three (3) months from notification of approval (see Conditions to Release Genome Canada Funds, Section 7.1). **Genome Canada reserves the right to withdraw its funding for any approved technology development project that is not ready to receive funding, or for which signed agreements have not been secured, within three months from notification of approval.**

7.3 Management of Funding

i. The agreement between Genome Canada and the Genome Centre will reference financial commitments from other persons, and specify cash flow statements, expected outcomes, comparative benchmarks and monitoring programs.

ii. As the needs and circumstances of each Centre, the technology development team members and partner organizations differ, the contracts between these partners will be negotiated individually and need not be identical, but should apply the same general underlying principles as defined in the agreement between Genome Canada and the Genome Centres. Genome Canada's share of the funding for approved technology development projects will flow from Genome Canada to the Centres. The Genome Centres will manage (e.g., disburse, monitor and report on) the funds for the technology development project.

iii. If co-funding is secured by way of a binding agreement, and funds can be shown to be available to meet the co-funder's obligations, Genome Canada's contributions can be adjusted to accommodate the timing of the expected receipt of funds from co-funding partners. However, where co-funding sources are not secured, Genome Canada's contribution will be based on 50% of the approved quarterly budget up to the maximum amount approved by the Board.

iv. Genome Canada will provide funding up to the approved quarterly contribution, a quarter in advance, in accordance with its established "draw" process. Subsequent quarterly advances may be adjusted to account for any unused funding of previous quarters.

v. Through the draw process, the financial status of co-funding must also be reported on a quarterly basis.

7.4 Accountability and Reporting

Each Centre must fulfil the evaluation, audit, accountability and reporting requirements established by Genome Canada, including the provision of information necessary to enable Genome Canada to assess the ongoing performance of the Centre and its activities. It is the responsibility of the investigators leading the technology development projects and S&T platforms funded by the Centre to participate in this process and to provide appropriate performance data and metrics as required by the Centres in respect to the project. As part of

its accountability process, Genome Canada requires each Centre to put in place mechanisms to assess the ongoing performance of all funded projects and platforms in order to determine from time to time whether funding should be continued, reduced, suspended or cancelled.

7.5 Final Reports

Within three (3) months of the completion of the technology development projects, each project will be required to submit to its Genome Centre a final report that includes a description of the accomplishments of the project, a financial report which reconciles actual expenditures to amounts budgeted and received, and the current state of any technology developed as a result of Genome Canada funding that is now being made available to the larger scientific community, including Genome Canada-funded Science & Technology Platforms.

Should any additional requirements or restrictions be placed on new funds received for this competition, Genome Canada will be obliged to ensure that the contracts between Genome Canada and the Genome Centres reflect these conditions and that the guidelines for this competition are modified, where necessary, to allow compliance with them.

If there are questions to help clarify any aspects of this competition, including scope and eligibility, please contact Chuck Hasel at Genome Canada.

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APPENDIX A - GENOME CENTRE CONTACTS

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APPENDIX B - EVALUATION CRITERIA

To ensure that the objectives of Genome Canada are met, technology development project proposals are assessed for scientific excellence and sound financial and management practices.. A threshold of excellence must be exceeded for each of the five criteria listed below. The descriptors following each criterion are not all-inclusive.

A Broad Criteria of Eligibility

1. Technology development applied to research in genomics, proteomics or related areas.
2. Potential application of new technology within 6-12 months following completion of the proposed project.

B Scientific Criteria

1. Scientific excellence of the proposed technology development project as affirmed by peer review; particularly the extent to which the technology development project proposed will increase the productivity of genomics or proteomics research.

2. Feasibility of the milestones and the critical path table, proposed objectives and goals.

3. The quality and experience of the applicants affiliated with the technology development proposal: the appropriateness of the training and/or track record of the applicant(s) for the proposed technology development project, in particular, prior technology development successes; the importance and originality of the recent productivity of the applicant(s); and the level of confidence in the ability of the applicant(s) to do the work proposed.

4. Demonstration that the technology development project to be carried out builds on existing Canadian strengths and expertise in genomics or proteomics research and/or targets a unique Canadian niche.

5. Demonstration of international collaborations.

6. Will the results from the proposed technology development project enable Canada to become a world leader? How does it compare to technology being developed elsewhere?

7. For projects that have ethical, environmental, economic, legal or social implications, the quality and appropriateness of the plan to address these issues.

8. The quality of the scientific environment in which the work will be done.

C Social and/or Economic Benefits

1. The quality of the plan for the transfer, dissemination, use or commercialisation (as appropriate) of the anticipated results of the technology development project proposed. Demonstration of how any technology developed will contribute to job creation and economic growth in Canada and their impact on society, quality of life, health, and the environment, including the creation of new policies in these areas.
2. Successful technology development project proposals must be able to demonstrate how they will deliver new technology directly related to genomics and/or proteomics within six (6) to twelve (12) months upon completion of the project.

D Financial Criteria

1. Budget/Control Processes/Reporting

i. The budgeted costs meet the definition of Eligible Costs (Section 6.1).

ii. The budgeted costs are aligned with the proposed technology development project plan and activities, and the relationship between the proposed costs and potential benefits of the technology development project proposed is evident.

iii. The reasonableness of a project's budgeted costs.

iv. The reasonableness of the rationale and justifications provided for budget items.

v. The capacity to account for and routinely report on the use of funds and status of actual versus planned activities, including the identification of potential savings.

vi. The effectiveness of financial and budgetary control processes or mechanisms, (e.g., processes for authorizing purchases, payments and budget adjustments).

vii. The reasonableness of costs associated with the ramp-up period in relation to recruiting, purchasing and installing new equipment, space requirements, and renovations.

viii. The overall quality of the documentation, especially the reasonableness of the underlying financial assumptions which support the proposed budget.

2. Co-Funding

i. The proposed co-funding plan complies with the Eligible Co-funding guidelines provided in Sections 6.2 and 6.2.1.

ii. The feasibility of the co-funding plan, that is, the ability to secure co-funding for eligible costs of the technology development project from other sources. This may be in the form of a commitment to co-fund or a plan for securing such funding.

iii. The supporting documentation made available, which may include letters of commitment or signed agreements by co-funding sources, quotes from suppliers, grant applications to other funding agencies, or confirmation of grants received.

iv. The demonstrated relationship between the proposed co-funding and the objectives of the project.

E Management Criteria

1. The appropriateness and quality of the management plan, including the effectiveness of the administrative and organizational management structure which addresses, for example, the following:
   i. The project management plan and accountabilities;
   ii. The mechanisms for communicating within the project, with the Genome Centre(s) and with collaborators and partners;
   iii. How technology developed is made accessible, communicated and transferred to project participants and the scientific community;
   iv. The management abilities of the proposed technology development team;
   v. The plan to recruit key personnel;
   vi. The role of key personnel and committees;
   vii. The frequency of meetings.

2. The appropriateness of the S&T platform(s) and/or other technologies chosen to support the technology development project and the effectiveness of the arrangements made with S&T platform management.

3. The quality of the plans for making critical decisions or choices about the overall technology development project direction, for example:
   i. The mechanism for making go/no-go decisions;
   ii. The evaluation of project progress (including the appropriateness and effectiveness of the Technology Development Advisory Board if the project budget is larger than $2M);
   iii. The responsibility for making strategic decisions when a consensus is not reached;
   iv. The discussion of key challenges/roadblocks and plans to address those issues, etc.

4. The strategies and implementation plan for forming partnerships and coordinating with relevant organizations (industry, governments, universities, hospitals and research institutes) and individuals, regionally, nationally and internationally.

5. The effectiveness of the plan for deployment of human resources, equipment and infrastructure, including the initial ramp-up period.

6. A plan that summarizes the strategy for communication, outreach and knowledge dissemination to the public.

7. For projects where there is commercial potential:

   i. The strategy for commercialisation, technology transfer and handling of intellectual property issues;

   ii. An IP policy in place or in draft form, which addresses, for example:

   - Management versus ownership;
   - The sharing of benefits with the technology development team, host-organizations, co-funders and the Centres;
   - The expected outputs in terms of publications and patents filed;
   - Costs of patent filing and protection;

   iii. The reasonableness of the proposed general terms that deal with the sharing of future benefits amongst the technology development team, participating organizations, co-funding partners and the Genome Centres.