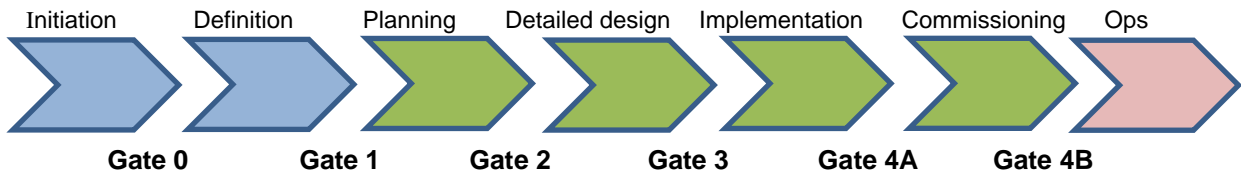


 TRIUMF	Gate # Review Report for P###	Document-#####
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Project Title:						
Gate (check more than one if combined):	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4A <input type="checkbox"/>	4B <input type="checkbox"/>
Project Sponsor:						
External Principal Investigator (if applicable):						
Proponent (Project Leader):						
Project Manager (if different than Proponent):						
Presenters:						
Location, Date, Time:						
Presentation material:	Appended to this report?		Yes <input type="checkbox"/>		No <input type="checkbox"/>	
	If No, then reference the material					

Panel members	Initials	Distribution:
Chair:		Sponsor, PI, Project Leader, Project Manager, Chair, Panel, Presenters, projectmanagement@triumf.ca, director@triumf.ca <i>Add other stakeholders that should be informed.</i>
Review panel members:	Approval Record	
		Approval Routing <i>Document Controllers: Update the 'Approval Record' hyperlink and route to Chair & Review panel members simultaneously for Approval.</i>

Outcome

Decision	Yes	No
Gate review accepted?	<input type="checkbox"/>	<input type="checkbox"/>
<u>Findings:</u>		
<u>Recommendations:</u>		
Actions	By	Date

Criteria

Gate 1 review checklist Gate 1 = End of Definition / Ready for Planning	Yes	No
Is the scope (objectives, deliverables) clearly defined?	<input type="checkbox"/>	<input type="checkbox"/>
Top level requirements defined, including regulatory requirements? Note: Regulatory requirements may include those from Canadian Nuclear Safety Commission, WorkSafe BC, Electrical or Building Codes, or N286-12	<input type="checkbox"/>	<input type="checkbox"/>
Preliminary costs estimated and draft budget created, including consulting with Finance? Note: Cost estimates should include considerations for inflation, currency fluctuations, taxes, shipping, customs, and risks	<input type="checkbox"/>	<input type="checkbox"/>
Source of funding (to get to Gate 2) confirmed?	<input type="checkbox"/>	<input type="checkbox"/>
Initial risks identified Note: Risks should include those affecting project scope, schedule, budget, operations, safety, regulatory or even impact to TRIUMF's governance	<input type="checkbox"/>	<input type="checkbox"/>
Initial hazards identified	<input type="checkbox"/>	<input type="checkbox"/>
Initial schedule and resources estimated, by fiscal year	<input type="checkbox"/>	<input type="checkbox"/>
Are there lessons to learn from previous projects that can help this project? Refer to Collection-25831 , which is a repository of lessons	<input type="checkbox"/>	<input type="checkbox"/>
Date of next gate review	MM-YYYY	
<i>Optional, for more complex projects</i>	Yes	No
Draft project plan completed?	<input type="checkbox"/>	<input type="checkbox"/>
Top level requirements released to Docushare?	<input type="checkbox"/>	<input type="checkbox"/>
System block diagram drafted?	<input type="checkbox"/>	<input type="checkbox"/>
Operational model released to docushare?	<input type="checkbox"/>	<input type="checkbox"/>
Are there anticipated operating budgets impacts (e.g., resources, licensing, replacing obsolete hardware, etc...)?		
Project governance structure in place (e.g., sponsor, steering committee, user advisory group)?	<input type="checkbox"/>	<input type="checkbox"/>

Will the facility's Safety Analysis Report (SAR) need to be updated (check with EH&S)?	<input type="checkbox"/>	<input type="checkbox"/>
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Gate 2 review checklist Gate 2 = End of Planning / Ready for Detailed Design	Yes	No
Actions from previous review addressed?	<input type="checkbox"/>	<input type="checkbox"/>
All released documents up-to-date?	<input type="checkbox"/>	<input type="checkbox"/>
Budget finalized, by fiscal year, ready to be baselined? Note 1: Cost estimates should include considerations for inflation, currency fluctuations, taxes, shipping, customs. Note 2: The budget should also include contingency based on analyzing similar projects (size/complexity) or based on an assessment of the risks (impact/likelihood)	<input type="checkbox"/>	<input type="checkbox"/>
Has external funding for this project (to Gate 4B) been confirmed with granting agency/partner?	<input type="checkbox"/>	<input type="checkbox"/>
Has TRIUMF funding for this project (to Gate 4B) been confirmed by ALD and/or Finance?	<input type="checkbox"/>	<input type="checkbox"/>
Account(s) created, including clarifying spending rules for TRIUMF cost centres?	<input type="checkbox"/>	<input type="checkbox"/>
Has the technical concept been reviewed by experts and stakeholders? See note below for more details	<input type="checkbox"/>	<input type="checkbox"/>
Hazard analysis done?	<input type="checkbox"/>	<input type="checkbox"/>
Microsoft Project resource-loaded schedule, using TRIUMF project template and resource pool? Note: For projects that are managed by a vendor (for example, a major construction project or a major software project), has the vendor produced an acceptable equivalent?	<input type="checkbox"/>	<input type="checkbox"/>
Is the schedule critical path understood?	<input type="checkbox"/>	<input type="checkbox"/>
Do you have major items (>\$50k), with long lead time, that should be procured before Gate 3? If so, do you have your project sponsor's authorization to do so?	<input type="checkbox"/>	<input type="checkbox"/>
Does your project have one or engineering designs that requires professional engineer sign-off, per TSOP-06?	<input type="checkbox"/>	<input type="checkbox"/>
Will your project result in a change to TRIUMF's physical security? If so, have you notified Facilities?	<input type="checkbox"/>	<input type="checkbox"/>
Is there a risk to TRUMF's cyber-security? If so, have you notified IS&T?	<input type="checkbox"/>	<input type="checkbox"/>

Will your project result in a change to radiation shielding configuration? If so, have you consulted with the Radiation Safety Officer?	<input type="checkbox"/>	<input type="checkbox"/>
Do you need space at TRIUMF, and if so have you consulted with the Space Committee?	<input type="checkbox"/>	<input type="checkbox"/>
Top risks identified, with credible mitigation actions?	<input type="checkbox"/>	<input type="checkbox"/>
Ready to baseline the schedule?	<input type="checkbox"/>	<input type="checkbox"/>
<i>Optional, for more complex projects</i>	Yes	No
For CFI projects: did the project successfully pass a TRIUMF review of its CFI funding application?	<input type="checkbox"/>	<input type="checkbox"/>
Critical interfaces (beam, nuclear ventilation, timing, etc...) identified and defined?	<input type="checkbox"/>	<input type="checkbox"/>
Have estimates for budget and schedule considered adverse effects if risks get realized, i.e. is there sufficient contingency in the budget and the schedule?	<input type="checkbox"/>	<input type="checkbox"/>
Project plan released to Docushare?	<input type="checkbox"/>	<input type="checkbox"/>
Hazard analysis released to Docushare?	<input type="checkbox"/>	<input type="checkbox"/>
Risk registry in use?	<input type="checkbox"/>	<input type="checkbox"/>

Note on Technical Concept Development and Review

Developing the technical concept, plus getting it reviewed, is useful for properly estimating the project's cost and schedule.

1. A pre-requisite is a released Requirements Specification document.
2. At this stage of the project, a technical concept can be a 3D CAD model, sketch or block diagram, supported by calculations or simulations as required. In addition, external interfaces (examples: beam, electrical power, mechanical services, safety systems, controls, etc...) should be identified.
3. Once a technical concept is sufficiently developed, the proponent finds a chair (e.g. project leader or sponsor), who then assembles a review panel of 3 to 5 people with relevant expertise.
4. At the review, the proponent shows:
 - How the proposed concept (3D model, sketch, or block diagram) can meet each requirement, including any calculations, simulations, or prototyping results
 - Listing each requirement with Yes or No compliance
 - An updated cost estimate based on the technical concept
 - An updated schedule estimate based on the effort needed to develop, build and commission the concept
5. After the review, the chair summarizes all comments and actions from the review panel, using template [Document-22597](#), and gets the document released to Docushare with the help of a Document Controller

Gate 3 review checklist Gate 3 = End of Detailed Design / Ready for Implementation	Yes	No
Actions from previous review addressed?	<input type="checkbox"/>	<input type="checkbox"/>

Did you receive a letter from the Director/CEO in support of your project, after your successful Gate 2? Note: This is applicable for projects who received Gate 2 after November 2021	<input type="checkbox"/>	<input type="checkbox"/>
All released documents up-to-date?	<input type="checkbox"/>	<input type="checkbox"/>
Commissioning plan drafted? Note: Different types of projects have different criteria and terminology for 'commissioning'	<input type="checkbox"/>	<input type="checkbox"/>
Drawings, diagrams or schematics released by ECO?	<input type="checkbox"/>	<input type="checkbox"/>
All Requirements Specification documents released to DocuShare?	<input type="checkbox"/>	<input type="checkbox"/>
Schedule critical path understood?	<input type="checkbox"/>	<input type="checkbox"/>
Budget by fiscal year is updated and remaining funds enough to cover projected costs?	<input type="checkbox"/>	<input type="checkbox"/>
Have you sent to the Procurement Department a list of all major items (>\$50k) to be purchased, with a timeframe, and agree with them on a procurement strategy for each?	<input type="checkbox"/>	<input type="checkbox"/>
Top risks identified, with credible mitigation actions?	<input type="checkbox"/>	<input type="checkbox"/>
Will any installation work happen during a shutdown? If so, have you notified the SAS team (sas@lists.triumf.ca)?	<input type="checkbox"/>	<input type="checkbox"/>
Date of next gate review	MM-YYYY	
<i>Optional, for more complex projects</i>	Yes	No
De-commissioning plan drafted? Proponent should ensure that all hazardous materials have a plan for disposal, plus check with EH&S to determine if decommissioning for the facility or equipment is already covered in the site Preliminary Decommissioning Plan (Document-8810) or whether the PDP will need to be updated	<input type="checkbox"/>	<input type="checkbox"/>
Integration and test plans reviewed by experts and project stakeholders (e.g. users)? Note: Different types of projects have different criteria and terminology for 'integration and test plans'	<input type="checkbox"/>	<input type="checkbox"/>
Controls (EPICS, data acquisition, MPS, etc...) specified?	<input type="checkbox"/>	<input type="checkbox"/>
Training gap analysis done?	<input type="checkbox"/>	<input type="checkbox"/>

The training gap analysis will reveal what the commissioning team and system users need to be trained on, for safe and effective operation		
Installation safety plan released to Docushare?	<input type="checkbox"/>	<input type="checkbox"/>
For construction projects >\$100k in labour and material, have you notified WorkSafe BC per OHS Regulation Part 20.2?	<input type="checkbox"/>	<input type="checkbox"/>
Risk register updated?	<input type="checkbox"/>	<input type="checkbox"/>
Summary of lessons to learn thus far, presented at Gate review?	<input type="checkbox"/>	<input type="checkbox"/>

Gate 4A review checklist Gate 4A = End of Implementation / Ready for Commissioning	Yes	No
Actions from previous review addressed?	<input type="checkbox"/>	<input type="checkbox"/>
All released documents up-to-date?	<input type="checkbox"/>	<input type="checkbox"/>
Commissioning plan released to Docushare? Note 1: Some projects, such as software projects, may not use Docushare but some other tool for commissioning plans or equivalent. Note 2: For vendor-led projects, such as major construction or software projects, the vendor may have own documentation management system.	<input type="checkbox"/>	<input type="checkbox"/>
Microsoft Project resource-loaded schedule, using TRIUMF project template and resource pool, updated? Or an acceptable equivalent, for projects led by vendors, such as major construction or software projects.	<input type="checkbox"/>	<input type="checkbox"/>
If any, deviation against the schedule baseline, as presented in Gate 3, presented?	<input type="checkbox"/>	<input type="checkbox"/>
Budget remaining is enough to fund projected costs?	<input type="checkbox"/>	<input type="checkbox"/>
Top risks identified, with credible mitigation actions?	<input type="checkbox"/>	<input type="checkbox"/>
Date of next gate review	MM-YYYY	
<i>Optional, for more complex projects</i>	Yes	No
Training plans released and training performed as required?	<input type="checkbox"/>	<input type="checkbox"/>
De-commissioning plan released to Docushare?	<input type="checkbox"/>	<input type="checkbox"/>

Integration and test plans completed and released as records to Docushare?	<input type="checkbox"/>	<input type="checkbox"/>
If facility SAR needed to be updated, has the updated version been released to Docushare?	<input type="checkbox"/>	<input type="checkbox"/>
For large procurement projects, are vendor warranty responsibilities and period understood?		
For software projects, is the post go-live model defined and resources needed approved?		

Gate 4B review checklist Gate 4B = Commissioning successful / Transfer to operations	Yes	No
Actions from previous review addressed?	<input type="checkbox"/>	<input type="checkbox"/>
All released documents up-to-date?	<input type="checkbox"/>	<input type="checkbox"/>
Commissioning records released to Docushare?	<input type="checkbox"/>	<input type="checkbox"/>
All drawings, diagrams, schematics updated to “as built”?	<input type="checkbox"/>	<input type="checkbox"/>
All project spending done and accounts can be closed?	<input type="checkbox"/>	<input type="checkbox"/>
Summary of lessons to learn emailed to project sponsor and to projectmanagement@triumf.ca , plus uploaded to Collection-25831 ? Note: Use template Document-162757 to summarize lessons	<input type="checkbox"/>	<input type="checkbox"/>
Email projectmanagement@triumf.ca that project can be closed?	<input type="checkbox"/>	<input type="checkbox"/>
<i>Optional, for more complex projects</i>	Yes	No
Training records updated?	<input type="checkbox"/>	<input type="checkbox"/>
Are Operational manuals, maintenance procedures, and training or job aids updated??	<input type="checkbox"/>	<input type="checkbox"/>
Manufacturer’s user and maintenance manual for procured equipment or software, stored in Docushare?	<input type="checkbox"/>	<input type="checkbox"/>
Hand-over meeting with operators and maintainers, including passing on of relevant documents and records?	<input type="checkbox"/>	<input type="checkbox"/>
Calibration index updated?	<input type="checkbox"/>	<input type="checkbox"/>

For software projects, is the post go-live model in place and operational, together with needed resources to support the model?		
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