



OLRT LESSONS LEARNED MITIGATION PLAN/

03- Minor Deficiency List, 05-Transition into Revenue Service, 07-Premature integration MARCH 2021

Issue:

Misunderstanding of the Contract penalties and Key Performance Indicators as well as unexpected open deficiencies lists appearing during transition into Revenue Service.

Findings:

As conveyed during the lesson's learned workshop, insufficient time was spent on the Paymec of the Contract to better understand the penalties, enforce the penalty period and define within the Contract how to manage the expectations from day one.

Furthermore, a lack of a bedding in period allowed for a hard stop between existing system (Bus) and newly transitioned project leading to multiple failure points. Such failure points even with back up were punitive and in some cases resulted in the challenge of redoing the work and retrofitting the design and with little implication of Subcontractors due to the Contract interfaces between Construction and O&M.

Most importantly the impacts found were:

- In the transition from Construction to Operation and maintenance, some KPI's were missing or appeared
- Application of penalties without understanding how they are applied (interpretation) appeared
- Lack of transition of Subcontracts into Revenue Service to support the overall project
- Remaining open deficiencies list transitioned and newly appearing deficiencies early in the transition
- Start of revenue service was not ready but pressure to start due to schedule delays
- Trial Running should have been extended from 2 weeks to several months

Overview:

The rules of engagement could be clarified with the Client during the Contract negotiations and allow for a bedding in period, including a winter, to transition into Revenue Service and manage discussions related to the KPI to be applied and when, with a potential penalty reduction regime for a given period. It is critical that the Operation and Maintenance group exhaustively inspects the entire deliverable from the Constructor for inclusion on the Deficiencies List at the time of Substantial

Completion. As a Construction Contractor, the remaining deliverables are largely governed by the contents of this list. If issues arise that are not on this list post-Substantial Completion, generally it is much more difficult to bring responsibility of any issues to the Contractor.

Tools & Recommendations:

Tool	Recommendation	Owner
1. Better control the Paymec early in the negotiation with the Prime Agreement	<ul style="list-style-type: none"> ➤ Better define, negotiate and understand the Prime Agreement ➤ Resolve and align Interface Agreement and Contract responsibilities ➤ Interface Agreement and Contract needs to account for main subs and Partners 	➤
2. Better definition of Key Performance and Penalties being applied	<ul style="list-style-type: none"> ➤ Based on impact on safety, ridership etc. identify impacts of penalties (punishment does not fit the crime) ➤ Suggest alleviation of penalties of non major impacts during bedding in period or non during period ➤ Transition from Construction to O&M, monitor and react to work orders, what work orders should be in each organisation or shared-define mechanism to monitor 	➤
3. Engage O&M in construction to interface at major milestones	<ul style="list-style-type: none"> ➤ Design integration with O&M ➤ Construction integration with O&M ➤ Testing and Commissioning integration with O&M ➤ Allow for a bedding in period, including a winter, to allow for the identification and time to resolve issues mutually ➤ Ensure all systems are ready for service- propose a staggered start with limited availability to gradually integrate into revenue service ➤ Analyse alternate method (ie bus service) and decommissioning/commissioning plan aligned with introduction into revenue service 	➤