

Lessons Learnt – MEP Systems

Observations:

1. Communications could be improved upon – inter disciplinary, and within each discipline
2. Technical assurance strategy was left in the hands of contractors, unchallenged
3. The drawing process was left in the hands of sub-contractors, unchallenged
4. Roles and responsibilities were not clearly defined or cascaded throughout
5. Assurance managers were not empowered to map out MEP assurance deliverables and strategies and implement at commencement of project
6. MEP Specialist Subcontractors had disproportionate power of their own and the project destiny
7. Procurement was not aligned to process.

Issues arising:

1. Assurance deliverables and strategies provided by sub-contractors could have been better thought through and clearly defined, mapped out and implemented at inception,
2. Assurance deliverables were given a lower priority
3. There was a fragmented and disjointed approach by sub-contractors with a combined delivery and assurance team
4. There was very little power to enforce deliverables or tie in to a programme
5. Assurance deliverables were lacking in quality and passed over without review to meet a programme date
6. Retrospectively mapping out, programming and instigating processes went against the flow
7. Large amounts of materials and equipment was incorrectly approved / accepted.

Recommended actions:

1. Above points 1 to 6 should not be left with the sub-contractor, CREs, PMs, section engineers or Quality Assurance to decide. They would be better strategised by an MEP assurance manager or someone who understands MEP systems within rail engineering. This person could take ownership, manage and plan out the deliverables in detail at the project inception from FAT to ITP to SAT to Handover O&M As-Builts which would all be clearly defined and joined up.
2. Roles and responsibilities of assurance managers and sub-contractor opposite numbers and team to be clearly defined and joined up.
3. Assurance team to be defined within sub-contractor and principle contractor counterparts and be autonomous to delivery teams.
4. Implement, tie-in and detail clearly in the future contracts issues items 1 to 6 above.
5. Implement robust reviews of sub-contractor procurement schedule and MARs.