# Responses to Recommendations from the 9th TAC Meeting

| Topic/TAC Recommendation | ICS Project Response to TAC Recommendation |
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| ICS Resources | |
| Failure to recruit a lead engineer for PSS should be added to ESS project risk register | Failure was averted as Stuart Birch arrived as lead PSS engineer in August 2014 |
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| ***Are the measures we have proposed to resolve the issues and review / implement the recommendations of the 1st ESS Annual Review adequate and sufficient?*** | |
| Issue ICS standards to IKC partners by Q3 2014 milestone | Standards for ICS are delayed: 1) PLC vendor choice has been delayed in order for procurement to put in place a legal strategy for the PLC Open Call for Tenders. We have that strategy now where all our in-kind contributors and collaborators will be able to benefit from our commercial agreements and the tender will be placed in November. Also, another call for tenders specific for PSS will be tendered simultaneously ; 2) Hardware platform decision to use uTCA.4 for higher performance system interfaces has been made. Further development is needed for the choice of modules and further discussions with stakeholders about the development path are required. |
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| ***Are the technical risks of the constructions plans for Controls comfortably low enough for safely achieving start of initial operation in 2019 on time, budget and performance?*** | |
| Reconsider using IKC to deliver part of the PSS | Labor associated with PSS development will be done internally. There is some possibility to procure hardware for PSS/ODH/ARM as in-kind, and we are investigating these possibilities, but the labor to develop PSS will be done in-house. Two engineers have been interviewed recently, and a third (super-tech) will be interviewed before end of the year |
| Proactively seek IKC agreements with other institutions | ICS has discussed in-kind activities with the following institutions so far: 1) CEA/Irfu controls for Proton Source and LEBT. 2) Uppsala for Spoke Cryomodule Tests. The agreement with CEA and Uppsala are ready to be signed. 3) PSI for electronics collaboration; 4) Evopro, Hungary for PLC integration; 5) Daresbury for vacuum integration; 6) Legnaro for DTL integration; The amount of in-kind funding potential realized by these efforts is not large, but represent collaboration with other project's major in-kind partners such as Accelerator. We are hoping to realize more to meet the goal required. |
| Proactively work with owners of accelerator subsystems to be delivered by IKC to see if these subsystems can include IKC of controls | Most of the institutions we have engaged in in-kind discussions are already involved with In-Kind accelerator contributions. We have discussed with CEA/Irfu, Catania, Legnaro, Uppsala, Daresbury, Huddersfield, CNRS, ESS Bilbao with respect to accelerator systems and controls integration and are preparing to join with them in developing controls wherever possible. |
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| ***What intermediate early key milestones are required to be met on the way?*** | |
| Add a milestone for hiring PSS Lead Engineer | Done, milestone has been met in August 2014 |
| Add a milestone to finalize scope of PSS and update cost estimate if needed | The plan is that scope for ICS efforts wrt PSS activities should be decided by end of Q4 2014. Cost estimate for PSS related systems will depend on the scope, but we will provide estimate during Q1 2015 |