

Yasky, Rebecca Kay

From: Hawkins, Matthew J.
Sent: Wednesday, February 06, 2019 12:00 PM
To: Tony Beasley
Cc: Yasky, Rebecca Kay
Subject: FW: [EXTERNAL] - Major Facilities Guide - comments

Hi, Tony...your email accidently went to Marsha. No worries...happens a lot!

Thanks for your comments! We'll add them to the official record for resolution.

The audience is both internal and external...which does make it more challenging. We try to summarize internal workings at a high level so folks understand the process. We have number internal process documents that the community does not see.

We have equal concerns about it growing in size and intend to pare down some sections as we beef others up. We may also bring in a professional editor as part of the next round to help with the organization and areas of duplication. It's likely time given its evolution.

The cyber-security section has gone through a series of evolutions. I'll spare you the gory details! If your team can provide a few more specifics on what definitions would be helpful and what they see as too prescriptive, that would be great!

Thanks again,
Matt

From: Hawkins, Marsha Y
Sent: Wednesday, February 6, 2019 11:06 AM
To: Hawkins, Matthew J. <mjhawkin@nsf.gov>
Subject: FW: [EXTERNAL] - Major Facilities Guide - comments

Hi Matt,
Happy New Year!
I believe the below email is for you.

Thanks and have a great day!
Marsha

From: Tony Beasley <tbeasley@nrao.edu>
Sent: Wednesday, February 06, 2019 10:31 AM
To: Hawkins, Marsha Y <mhawkins@nsf.gov>
Subject: [EXTERNAL] - Major Facilities Guide - comments

Matt, please find below some comments on the public comment draft of the Major Facilities Guide. Most comments pretty minor.

Three other comments:

- I've lost sight of who the audience is for this document now. If it is meant to be project proponents – ok, it does a lot of that, but also has long sections on the way NSF is governing MREFC, how NSF is doing it's internal processes, etc. I like knowing that stuff, but it increases the bulk of the document and therefore the challenges to efficiently extract information from it. I think this document may be too long now ... there's a lot of great stuff, but it's not easy to read or navigate. There are long detailed sections in there (like Risk management) that probably would be better off in their own documents, and merely summarized here? The LFM used to be about policy and summaries of processes, we seem to be leaning towards recording the processes in here now, which is making it unwieldy? My opinion only, perhaps.
- The section of how LFO, CORF, senior NSF layers interact with projects – was somewhat difficult to understand. The landscape IS difficult to understand, I know. I wonder if this material would be better as highly summarized here, more detail in some supporting doc?
- My IT guys read the cybersecurity section; indicated to me that it lack definition in many areas, but was too prescriptive/detailed in others. Just a data point. Obviously, this is a key topic for the Foundation moving forward, more discussion to be had.

Overall, this document and the processes described continue to improve. Thanks for the opportunity of providing feedback.

regards..

Tony Beasley
NRAO

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- preference: real page numbers vs section-specific numbers (which can get deep and long)
 - page 1.1-1 (hereafter p1.1-1) – paragraph 2 (hereafter para 2) – end of paragraph - you say cooperative agreements are “the appropriate” approach, which seems to imply contracts aren't ... but you admit you do have contracts. “an appropriate funding mechanism” better?
 - p1.1-2 para 2 – you talk about NSF using CAs with a range of organizations, but you don't list “for profit” orgs... omission? (polar: Lockheed martin).
 - sama para typo affords -> afford
 - same page para 4 – seems like the guide talks about more than just “planning and management” .. initiation, planning, evaluation, execution, performance monitoring, lifecycle, etc.
 - same para – you use the phrase “life cycle”, but not clearly defined.
 - p 1.1-3 para 1 you kind of define life cycle here... move up?
 - same page para 2 – bullet 2 – you refer to the National Science Board – is that body defined somewhere? (overall question – are the committees/boards/departments/individuals involved all named somewhere?)
 - this bullet - \$100M before some external constraints added? Seems a bit high to me. And there are \$25M projects with horrible externalities (international partnerships) where some monitoring might be relevant. I know this won't be a popular opinion here, but defining the threshold purely by cost, and setting that number so high, seems... brave. Conversely, too much process on small projects is annoying and wasteful.
 - same page para 3 - LFO acronym used ... defined?
 - p 1.2-1 para 2 hierarchy of documentation ... wouldn't there be some higher docs? NSF organic act, NSF mission/charter, NSF strategic plan, ?? I dunno.
 - same page para 4 – merit review, programmatic/technical review, substantial ... all jargon?
 - p 1.2-2 .. you ask POs for feedback, don't tell them how to deliver it ... “please direct your comments to XXX”
 - p 1.3-1 para 1 third bullet, comma missing after facility
 - p1.4-1 p sect 1.4.1 – why is “Major Facilities” both capitalized?
 - Same page, sect 1.4.2 – remove history lesson, just state current limits at time of document freeze?

- Sect 1.4.3 – same comment ...
- Sect 1.4.3 and 1.4.4 – you make this distinction about “multi-user” .. is that real? generally big facilities are for multiple science goals, but so are some of the midscale facilities (in fact, they go out of their way to find additional uses for their data). the “multi-user” definition is a correlation, not causal?
- p 1.4-2 sect 1.4.5 – Recompt thing non sequiter ? And is an award issue, not a facilities issue. this text seemed lost here.
- p 2.1.2-1 (ahem.. 7 character page number ☹) para 1 and 2 .. you talk about projects, do you mean facilities?
- p 2.1.3-4 .. para 2 – At the Operations Stage, you talk about the Concept of Operations doc being in place – suggest at this point, detailed operation plans and a full suite of maintenance / development plans should be in place.
- p 2.1.3-5 para 2 .. “Sponsoring Directorate” defined?
- p 2.1.4-1 – final sentence – here you seem to suggest for-profits can be involved. (see comment above).
- sect 2.1.5 TBD
- Sect 2.1.6.1 ... here you provide those definitions of stakeholders... could reference earlier ... (NSB defined?)
- p 2.1.6-4 ... ok, cruel comment. all these panels and boards are confusing. It looks like you’ve got multiple threads of governance and responsibility, and I appreciate the effort to map it out in some non-conflicting way, but.... (understand, this may be where we are at present, but I’m pretty sure if I provided you a project org chart like this, you’d want it thinned/trimmed).
- This oddness further reinforced on p 2.1.6-15 (8 character page number) where the CORF and Head, LFO roles defined. I know some of the history here, so don’t mean to bug you, but the lack of connection between these two roles is odd. Shouldn’t – LFO report to CORF, not BFA? Enough said.
- diagram 2.1.6-18 – indicates the rich complexity.
- p 2.4.2-1 para 2 .. close out review – is this an internal (NSF only) or external review?
- p 2.4.2-3 – I thought the descriptions through this whole section about transitions to Ops were a bit simplistic .. in reality, there are profound interactions between construction and operations, with potential costs/damages going both ways depending on what happens, complexity about ownership of equipment (owned by construction, ops?) etc. Seems like between “construction” section and “ops” section there should be more discussion of several vexing transition issues.
- p 2.5.1-3 para 2 – you state “NSF rarely maintains ownership” ... I disagree. You are the owners, it may be the title of things is in the mgt org hands, but if they lose recompetition, they are obliged to sign the equipment to new mgt org. May need some finesse in this description.
- p2.5.1-4 .. your Annual Operations Reviews ... we call them Program Operating Plan reviews...
- p 2.6-1 – do you want to mention that typically it is considered that decommissioning costs for a facility are about the same as 2-3 years of ops costs? (I don’t know where this rule came from, and I can think of horrible exceptions e.g. AO, but giving some sense of scale might be considered).
- Sect 3.2 TBD
- Sect 3.3 – title is “NSF Oversight Management Plans” should be “NSF Internal Management Plans” ?
- p 3.4.1-1 – table should include any special construction requirements, closeout requirements?
- same page: important for PEP to document all assumptions and boundary conditions driving project design and implementation. (didn’t hear that clearly...)
- Table 3.4.1-1 .. kinda long, really breaks up the document. Put in as an appendix (like previous LFM’s?).
- Missing from Table 3.4.1-1 – A Construction to Operations Transition Plan?
- Sect 3.4.2 – TBD
- Sect 3.4.2.15 para 4 ... Operational Readiness Review ... this gets back to the point raised above... sometimes you’re already in operations while still in construction? Might be good to check that your callouts here (like this review) make sense in these complex C->O transitions. Could be “Science Operations Readiness Review”.
- p 3.4.2-3 ... having only concept of operations doc at this stage seems too little too late.
- p 3.5.2-1 ... para 3 ... discussion of FFRDC complexities. Don’t think FFRDC’s are defined anywhere in this doc.
- same section – you talk about a “comprehensive review” ... aren’t they all?
- Sect 4.2.2.5 ... would it be useful to open this section with an explanation of the uses/philosophy behind Fee?
- same section – in the middle you refer to “cost contracts” .. relevant for CA/CSAs?
- section 4.2.2.6 OMB inflators ... why isn’t LFO delivering each year for all projects?

- p 4.2.3-7 – figure is unreadable.
- p 4.2.4-1 no discussion of metrics? KPIs?
- p 4.2.4-3 and last sentence sect 4.2.4-4 – you’re discussing contingency in operations estimates – is that a thing now? Has been outlawed previously.
- p 4.2.5-2 para 4 .. you mention “Scope Contingency”. Ok, but key point is it’s hard to use late in the project... add some text to indicate that scope management plans/docs must be accompanied by time profile information ?
- Same para – you say scope plan should be for at least 10% of baseline budget – you mean 10% of TPC?
- Same para ... good to make the relevant Directorate on the hook for the first 10%
- p 4.2.5-3 para 4 ... delete “even when properly managed” weird
- Sect 4.2.5.8 ... reporting also impacted by construction to operations transitions ... may be need for additional reporting in overlap period.
- Fig 4.2.5-1 hard to read...
- Sect 4.2.6 ... again referring to contingency in ops. If we’re doing this – what happens to unallocated contingency in Ops – roll to next year?
- p 4.4-1 para 3 ... here you talk about “Transition Plan” ... defined previously?
- p 4.4-2 bullets ... add “discussion of risks to project from operations delays” ?
- p 4.6.3-5 sect 4.6.3.6 ... refer to section 6.8?
- p 4.7.2-1 .. I suggest you structure these agreements to produce a default operations number, consistent with a 5-yr plan. (ALMA is suffering from lack of this). Or a default that this year is last years plus the appropriate inflation.
- Risk section (6) ... long. It’s good, but I wonder if shouldn’t be in a separate document.
- Sect 6.2.11.1 ... any guidelines on what year dollars the contingency is stored in... then year? Do they inflate year to year when carried over?
- Sect 6.3 ... I had our IT/Cybersecurity guys review the section. No significant comments, although they noted that several definitions were soft (e.g. cybersecurity component of IT budgets 3-12% ... deciding what to include/not means you can land on any number).
- Sect 6.3.5.1 – IT here claims that NIST 800-171 is the more appropriate reference.
- Same section para 4 .. definition of “Information Systems” .. the scope you suggest is “insane”, according to my guys ☺ SCADA and HVAC? Too deep. Need layered security.
- Sect 6.5 ... seems pretty short for what is what of the most detailed and painful parts of NSF construction planning.
- Sect 6.8 – doesn’t talk about the formal requirements for EVMS mentioned earlier? sect 4.6.3.6
- Lexicon .. seemed like there are entries missing, and entries for items not called out (Pessimistic Duration .. seems like there was more pedagogical scheduling info in here at some point). Fonts weird. Few entries out of alphabetical order.

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