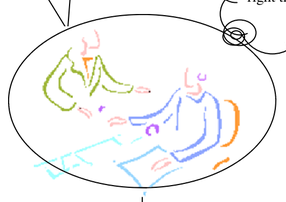
So What? - A Guide to Developing TIM Impact Statements

Think of this process as fault tree analysis from the bottom up, with added advantage that you're the one who's already figured out what went wrong!

I submitted your amazing TIMs to the project and their response is, "So What?"

Whatever happened to fixing it because it was right thing to do??



Don't feel bad. If impact statements were easy, you wouldn't be reading this. You've taken the TIM Summit training, haven't you?

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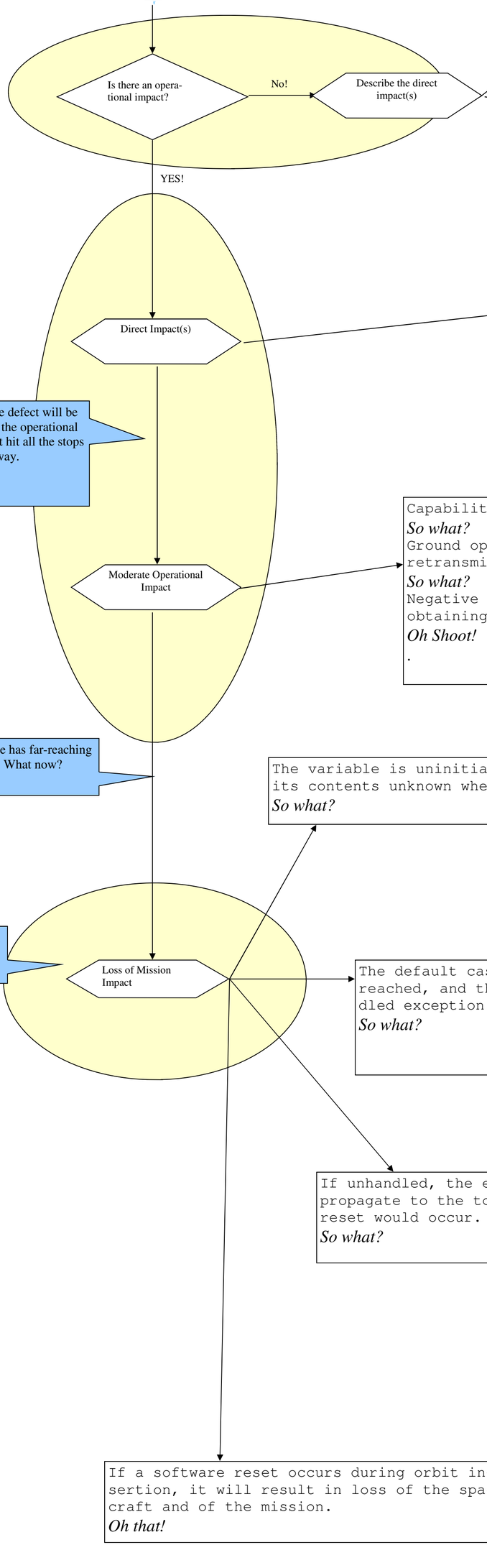

Assume the defect will be realized in the operational system, but hit all the stops along the way.

This issue has far-reaching impacts. What now?

This always gets attention, but we'd better be able to back it up.

The description for Test-A lists requirements 1, 2, 3 as tested. They are actually verified in Test-B.
So what?
Reconciling the error in where the requirements are verified will delay verification of test results.
So what?
Delays in verifying test results could cause test program to miss project milestone.
Ok!

Simply saying that something is incomplete, inconsistent or just plain wrong is inadequate information for the project. The impact helps them assign priority and get it fixed!

The test script description references an obsolete IRCD. The software is built to the current version.
So what?
The expected test results will indicate a false error reported, delaying correct interpretation of the software verification.
So what?
Delays in verifying test results could cause test program to miss project milestone.
Ouch!

IV&V is great at finding incorrect/ inconsistent references. Why should the project care?

Well it still works, project still may not care much.

Ding-Ding! No more calls, we have a winner!

Test Case A does not completely verify Requirement 1.
So what?
The test case is incomplete. A significant capability is not being verified in this test.
So what, it still works… we think?
If an error is present, the error might not be detected until integration and or system test, causing delays and resulting in costly bug fixes.
DOHT!

Not to mention the R-word… rework!

Capability 1-A may not execute as intended.
So what?
Ground operators will be inconvenienced, and have to retransmit command.
So what?
Negative impact on mission ops scheduling, delays in obtaining mission science data.
Oh Shoot!
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You will get this directly from the requirement. No guesswork required!

Waitaminute! How did we get here?

Enter the visualization of requirements and test analysis networks

The variable is uninitialized and therefore its contents unknown when evaluated.
So what?

The default case would be reached, and throw an unhandled exception.
So what?

L-5 Requirement

If unhandled, the exception would propagate to the top, and a software reset would occur.
So what?

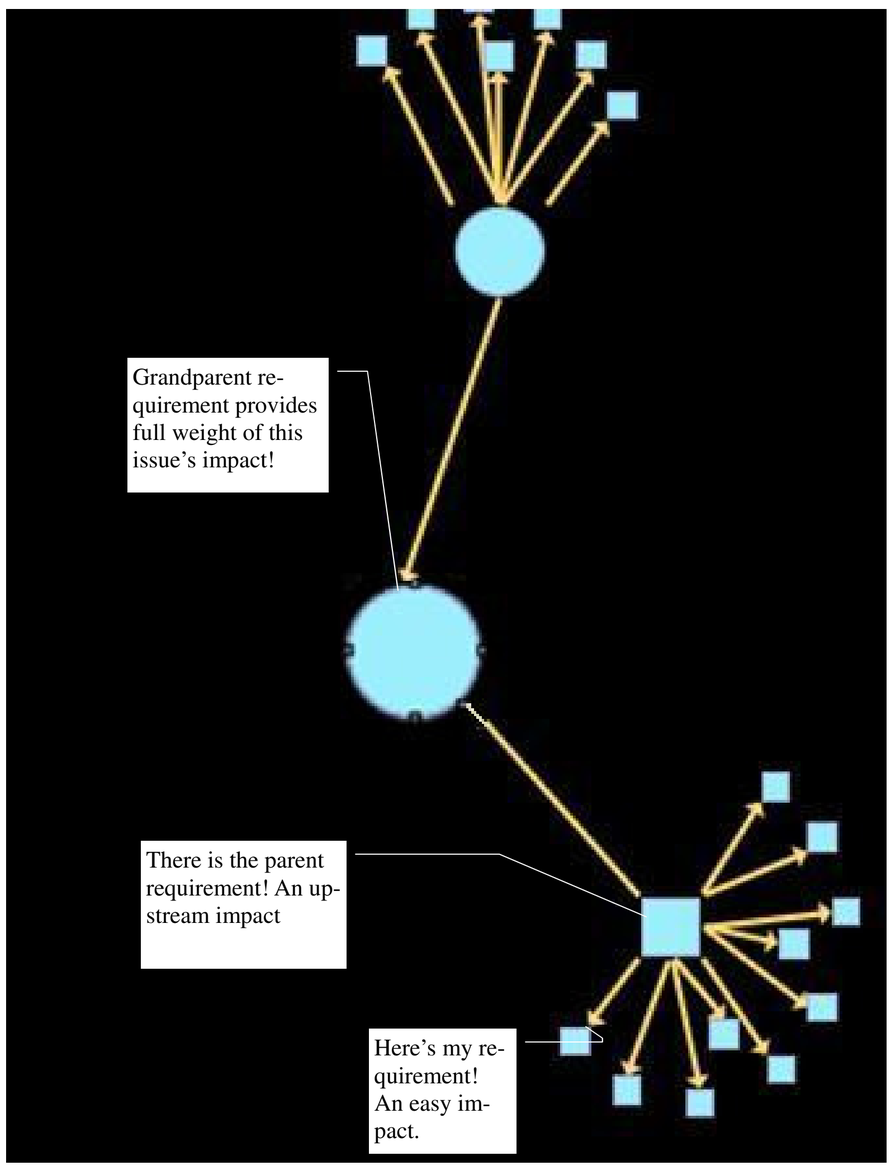
L-4 Requirement

If a software reset occurs during orbit insertion, it will result in loss of the spacecraft and of the mission.
Oh that!

L-3 Requirement

Free Offer

An easy to navigate requirements network tool makes it a breeze to characterize upstream impacts!



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