



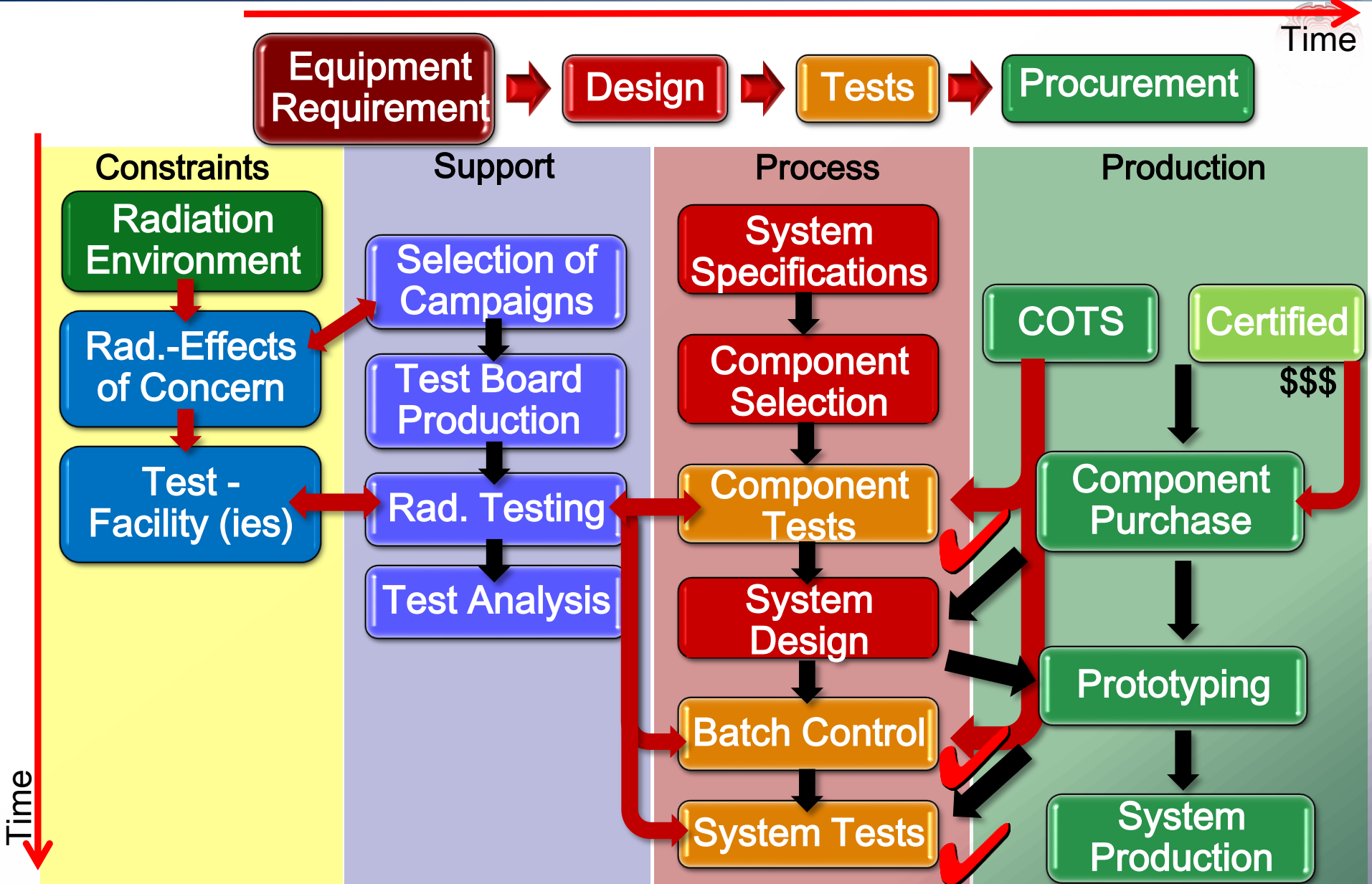
A&T Radiation Test Preparation and Follow-up Procedure

CERN R2E Project

RadWG Meeting November 14th 2013

M. Brugger for the R2E Project

A (Rough) Map to Rad-Tol



- ⊙ **Large number of test campaigns**
 - ⊙ **External facilities:** PSI, CEA, etc.
 - ⊙ **At CERN:**
 - ⊙ H4irrad/CNRAD in the past
 - ⊙ CHARM in the future (mid-2014)
 - ⊙ Co-60 facility in the future (2014+)
 - ⊙ **Through contracts:**
 - ⊙ Fraunhofer frame contract (TID mainly)
 - ⊙ Others: TRAD
- ⊙ **This is an investment**
 - ⊙ Money and man-power
 - ⊙ **Knowledge**
- ⊙ **Optimal preparation, implementation follow-up and documentation is thus a MUST**



**Based on cumulated
experience during
the last years**

- ④ Profiting at maximum from **available knowledge**
- ④ Analyzing test requirements at an **early stage of a project**
- ④ Bringing relevant **experts** together (**informally!**)
- ④ Iterating radiation tests at three stages
 - ④ **Before**: requirements, implementation, time-line
 - ④ **Immediately after**: early analysis
 - ④ **Finally**: iteration of test reports and open questions

Who?

- ④ Designated test **procedure coordinator** (R2E/RadWG)
- ④ Radiation **test team representative(s)** (A&T group in charge)
- ④ **R2E A&T Expert** (RadWG chair/secretary or R2E project)
- ④ **PH/ESE representative** (optional)
- ④ **External expert** (optional)

When

What

**1-2 months
prior the tests**

- Technical presentation by the test team representative
- Preliminary discussion/verification of test procedure
- Check of representativeness for accelerator application
- Optimization of test parameters and scheduling

**2-4 weeks
prior the tests**

- test readiness check consisting only of a first formal email exchange, verifying that all equipment is ready and tested
- an optional meeting can be scheduled in case points need to be clarified between the previous preparation step and the eventual radiation test campaign

**~2 weeks after
the tests**

- Brief discussion and possible interpretation of test results
- Review of ambiguous test data
- Discussion of optional follow-up investigations
- Iteration of test report template to be fully adopted for the specific case

**At latest
2 months after**

- Presentation of final results
- Verification of final report to be presented to the RadWG and the report to be published within two weeks afterwards

This support 'procedure' will ensure:

- @ an **optimized** (result and cost oriented) **preparation** of radiation test campaigns
- @ an effective way to **build upon existing knowledge** across the R2E community
- @ a **complete documentation** of the obtained test results
- @ a comprehensive study of the implication for the concerned equipment group on **future CERN operation**
- @ an efficient **sharing of test data** and results



... and?



YOUR INPUT IS IMPORTANT

The Coordination “Victim”

