

Interim Report Purpose



- Cover physics, detector, accelerator and technologies
- Show that we are on a good track
- Motivate further increase of support

- Report the progress since the Roadmap
 - To show that we are doing our job
- Present the current planning
 - To use as a reference for the next report
- Identify key missing efforts
 - To help find resources

- Manage expectation for next reports

- Earmark key elements of the study
 - e.g. RF test stand to support the need of an infrastructure
 - e.g. highlight that options exist to site the demonstrator

Promised by February next year (and end of this year in Roadmap)

Prepare version for end of November, will try to understand when document is really needed by LDG/Council

Steinar proposes that the Advisory Committee should review this as the first task

Interim Report Structure



Collaboration Development (Nadia Pastrone, Steinar Stapnes, Daniel Schulte, also Mark Palmer, Sergo Jindariani, Diktys Stratakis)

- Members, contributions, MuCol, US plans

Physics Potential (Andrea Wulzer)

- Also synergy physics case

Physics, Detector and Accelerator Interface (NN)

- Physics and detector needs
- MDI

Detector (Donatella Lucchesi)

- Concepts
- Technologies
- Performance

Accelerator design

- Overview
- Proton complex (Natalia Milas)
- Muon capture and cooling (Chris Rogers)
- Acceleration (Antoine Chance, Heiko Damerou)
- Collider ring (Christian Carli)
- Collective effects (Elias Metral)

Accelerator technologies

- Magnets (Luca Bottura)
- RF (Dario Giove, Alexej Grudiev)
- Target (Marco Calviani, Anton Lechner)
- Beam-matter interaction (Anton Lechner)
- Muon cooling module (Lucio Rossi, Roberto Losito)
- Others (e.g. cryogenics, vacuum) (Roberto Losito)

Synergies

- Technologies (Luca Bottura, ...)
- Facilities (Chris Rogers)
- Experiments (maybe integrate above)

R&D programme development

- Demonstrator (Roberto Losito, Chris Rogers)
- RF test stand (Dario Giove, Alexej Grudiev)
- Other test infrastructure required (HiRadMat, ...) (Roberto Losito)

Executive Summary (Nadia Pastrone, Steinar Stapnes, Daniel Schulte)

Interim Report Section Layout



Could be similar layout for each section

However might want to group the whole report into this as parts (the first two together) and have sections under them

System Overview

- Short description of the system

Key challenges

- Reminder of key challenges of the system?

Work progress since Roadmap

- Status of the current concept

Work planned for Evaluation Report

- Based on existing resources

Important missing Effort

- What would be important to add?

Key Messages



- Strong interest in the collaboration
- Substantial increase in resources
 - Thanks to EU Design Study
 - More resources in institutes (e.g. CERN MTP)
- Good progress in studies
 - Many examples
- Still not at level asked for
 - What do we focus on with the existing resources?
 - What should we be able to achieve?
 - What would be important to add?
- Synergies
 - Strong synergies exist in particular for HTS magnet development, strong impact on society
 - Other technology synergies exist (e.g. power converter)
 - Synergy with other physics programmes are being explored
- What will we need in the future?
 - RF test stand, demonstrator etc.
 - Technology developments