FUTURE CIRCULAR COLLIDER

Expectations from FCC Study

Michael Benedikt, CERN

CERN, 23 March 2023

Expectations for support in matters of sustainabilty

Technical domains (energy efficiency, waste management, materials, technologies, etc…)

- guidelines and proposals for technical groups
- guidelines for long-term operation, maintenance, etc at technical level
- identify suitable EC calls/collaboration partners for technical developments

Environmental (resource consumption, integration in “environment”, territorial implementation)

- guidelines and proposals for technical groups (via resource consumption)
- research on EC, host state rules, regulations and plans for applicability for CERN (e.g. EN ISO50001)

- **Socioeconomic impact**, valorisation of investments

- **General aspects** (number of long-term users, etc…) long-term valorisation of investments

FUTURE CIRCULAR COLLIDER

FCC – SYNTHESE DES CONTRAINTES ET OPPORTUNITES D'IMPLANTATION

FCC-2107150900-CER

Date : 07/02/2023

Grant Agreement number: 951754 — FCCIS — H2020-INFRADEV-2018-2020 / H2020-INFRADEV-2019-3

FCC

Futur Collisionneur Circulaire

RAPPORT LIVRABLE

SYNTHESE DES CONTRAINTES ET OPPORTUNITES D'IMPLANTATION

Identifiant du document	FCC-2107150900_Synthese_implantation_territoriale_V0100.docx
Autre identifiant	10.5281/zenodo.7614421
Date de la version	07/02/2023
Groupe de travail	FCCIS – WP3 Intégrer l'Europe
Organisation	Cerema - CERN
Version	V 1.1
Statut	Version publiée
Domaine	Implémentation
Mots clés	FCC, implémentation, impacts environnementaux, opportunités territoriales

Page 1 sur 505

Report on placement studies and reference scenario published

https://doi.org/10.5281/zenodo.7614421

- **Deliverable** document on the development and feasibility of placement scenarios prepared in the frame of the **EU co-funded H2020 project FCCIS** by CERN, Cerema and Latitude Durable
- 119 contributors from different countries and organisations contributed with information input to the report
- This is the reference document for further studies and interaction with host state authorities and other services. Distribution ongoing
- This report covers the mid-term deliverables
  D1.1, D3.1, D3.2, D3.3, D3.5, D3.6, D3.7, and D3.9

Collider placement scenario development status

- **Rationale** for an FCC ”*why here and not elsewhere*” **documented**
- Placement development **methodology documented**
- **Constraints and requirements** identified until December 2022 **documented**
  - Territory is evolving continuously. Exhaustive coverage requires determined host state accompaniment and “reservation of terrain”.
- PA31-3.0 placement **scenario developed and documented in detail** and distributed to host state authorities and public administration services and communes
- Scenario available as reference baseline for
  - **environmental aspect analysis** to optimise and validate the surface site locations
  - **subsurface investigation** planning
- Documented scenario PA31 **needs**
  - **to be reviewed** by the host state technical public administration services (e.g. DT, DDT, DREAL)
  - **to be optimised** with the host state technical public administration services and local actors
  - **to be technically validated** against incompatibilities by the host state authorities accompanying CERN
    - To be clarified how this can be accomplished pragmatically, since a formal validation cannot be requested and host state authorities would not provide engagement statements in any form today.