



FUTURE CIRCULAR COLLIDER

Innovation Study

FCCNoW 2020 - MATEX Workshop

Plan and status for the development of an
excavated materials management plan

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Tuesday 10 November 2020

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MATEX working group

Document for the management of the excavated material

Purpose

Structure

Implementation in the framework of the FCCIS

Timeline



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MATEX

MATEX: working group for the establishment of a document for the management of the FCC excavated material

PARTICIPANTS



Organization:

- Plenary meetings every 6 weeks
- Specific meetings per work package

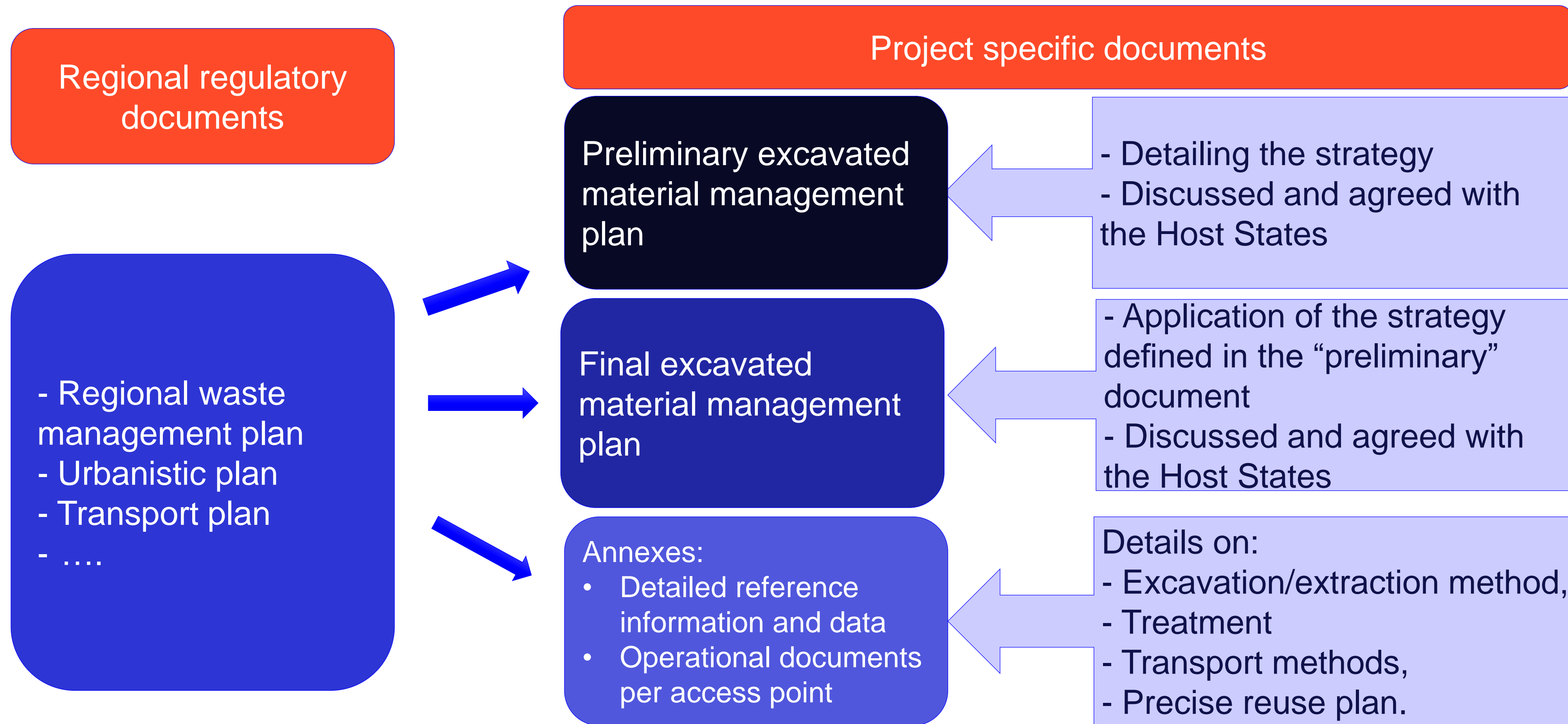
Collaboration with external experts :

- Regulatory framework: University of Lyon 3,
- 3D subsurface modelling: University of Geneva, GESDEC, University of Grenoble, Université "La Sorbonne" (Paris)

Support by external consultants for specific workpackages:

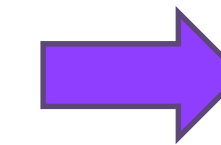
- inventory of regional opportunities: SETEC Ierm

Excavated material management document



Purpose of the document

- Clear distinction between planning documents and the present plan for the management of excavated materials on the FCC site : **The Owner's strategy for the FCC site!**
- This plan must comply with both **French and Swiss planning documents**
- This management plan should refer to **all excavated materials on the FCC site** (earthworks and underground excavation)



Proposal for the structure of the management plan of the FCC

Structure of the document

4 main parts:

- 1. An exceptional project concerning the management of excavated materials
 - 2. Risk management process
 - 3. Management and use of excavated materials
 - 4. Innovative roadmap and action plan
- + *References and annexes*

EDMS 2155075 | V 0.8

7 January 2020

Management of excavated materials of CERN's Future Circular Collider

Template and Guideline for the Plan

Document identifier: EDMS 2155075

Date: 7 January 2020

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Part 1

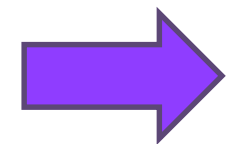
1. An exceptional project concerning the management of excavated materials

Introduction

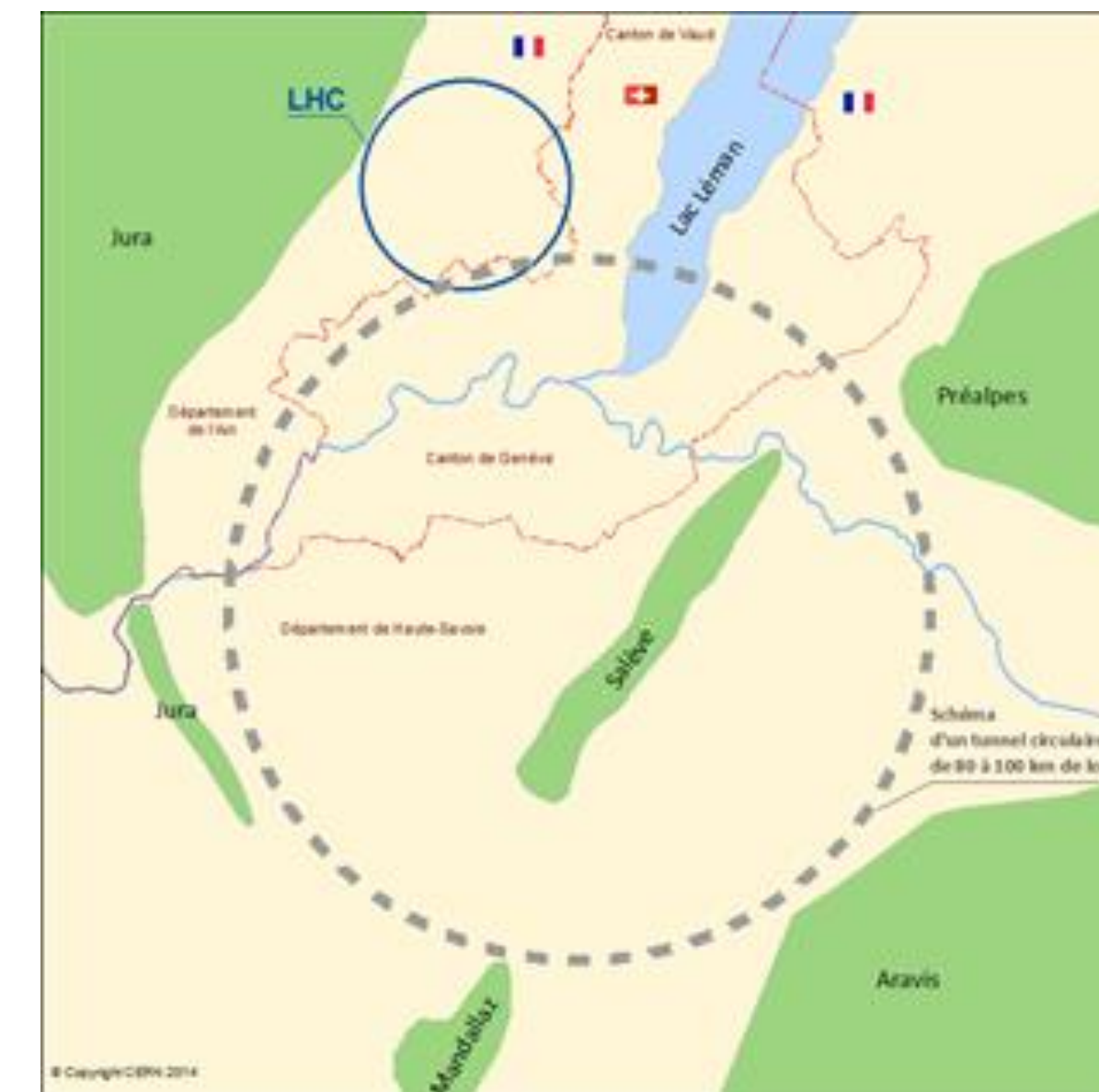
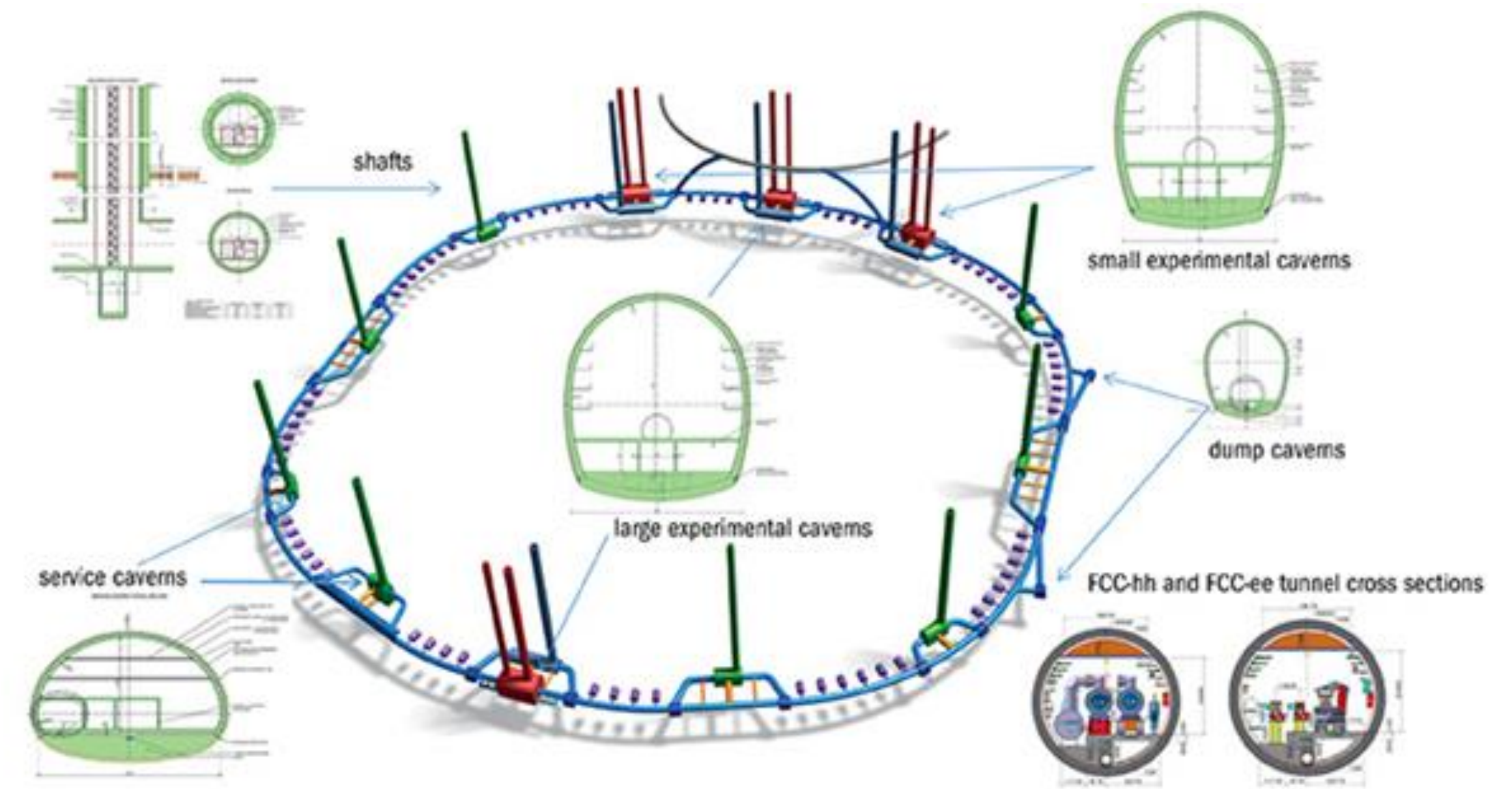
CERN's future circular collider

Context and challenges

The project owner's priorities and commitments in terms of excavated materials management



Definition of the Owner's commitments and priorities. They can be described according to the 3 dimensions of sustainable development: environment, social/societal, economic



Part 2

2. Risk management process

Risk process

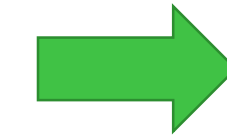
Project phases and associated activities

Subsurface investigations

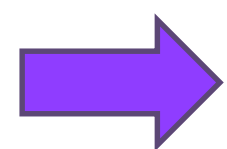
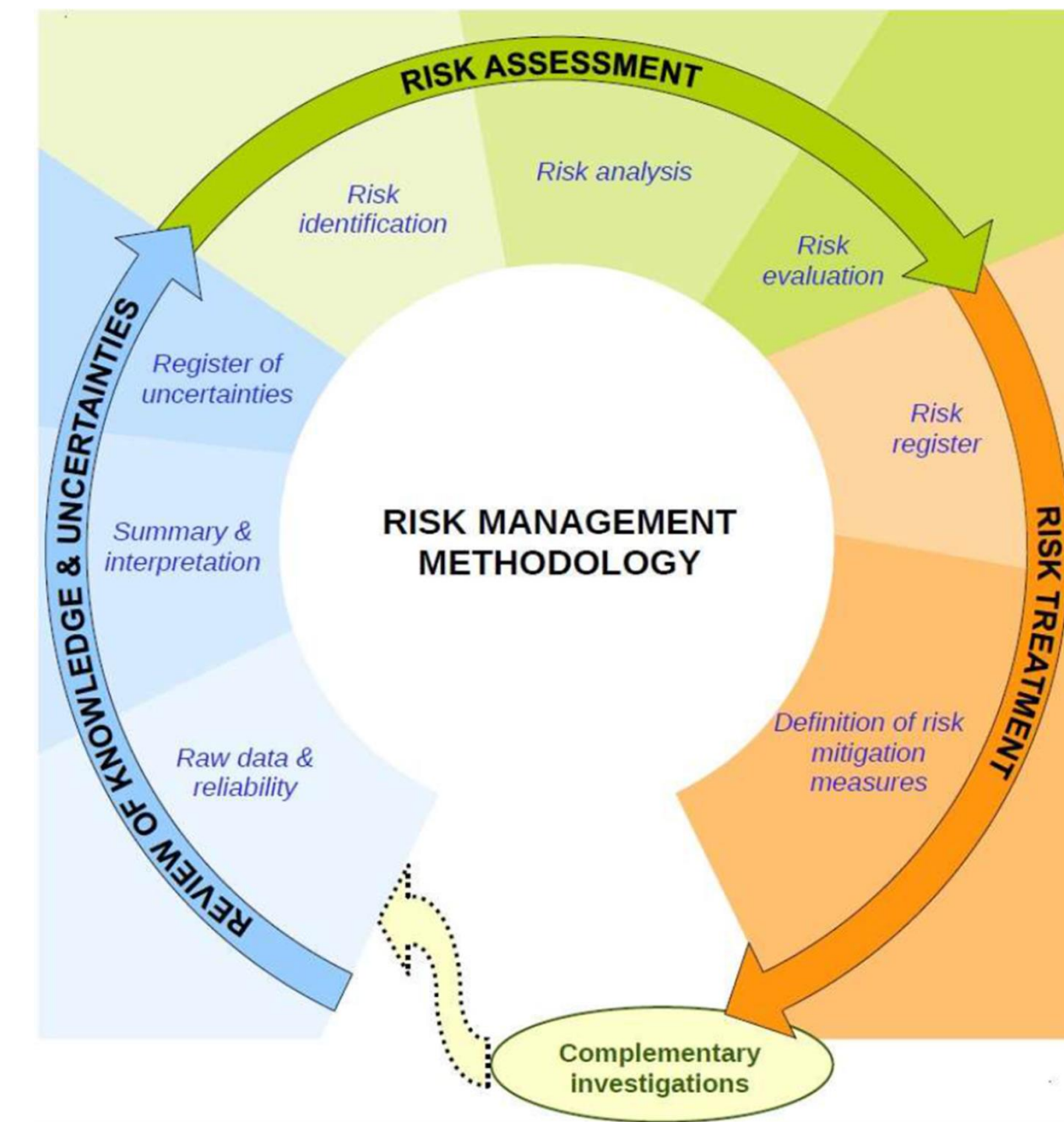
Impact of excavation methods on use

Strategy for handling and treatment of polluted materials

Quality management



Dedicated presentation during the “FCC Week”
Florent Robert (CETU):
“Risk management applied to excavated materials”



- Definition of study phases compatible with the regulation from Swiss and France
- Implementation of a risk management process
- Specific section of this process dedicated to the management of excavated materials

Part 3

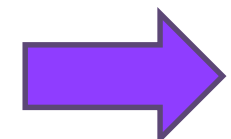
3. Management and use of excavated materials

Regulatory requirements

Identification of possible use cases

Excavation material use case description

Logistics: treatment, transport, delivery, storage and disposal



- Only the broad lines and general principles will be set out in this management plan
- Depending on the stages of the FCC project, operational and detailed documents will be drafted



4 dedicated presentations during the “FCCIS Week”:

Laetitia D’Aloia (CETU), Jacques Martelain (GESDEC)

“Legal requirements: constraints and opportunities”

Robert Galler (University of Leoben):

“Management of MATEX as part of the environmental risk management process”

Maximilian Haas (CERN):

“Rock characterisation for tunnel construction & re-use”

Antoine Faure (SETEC):

“Survey of regional opportunities for the excavation material”

Part 4

4. Innovative roadmap and action plan

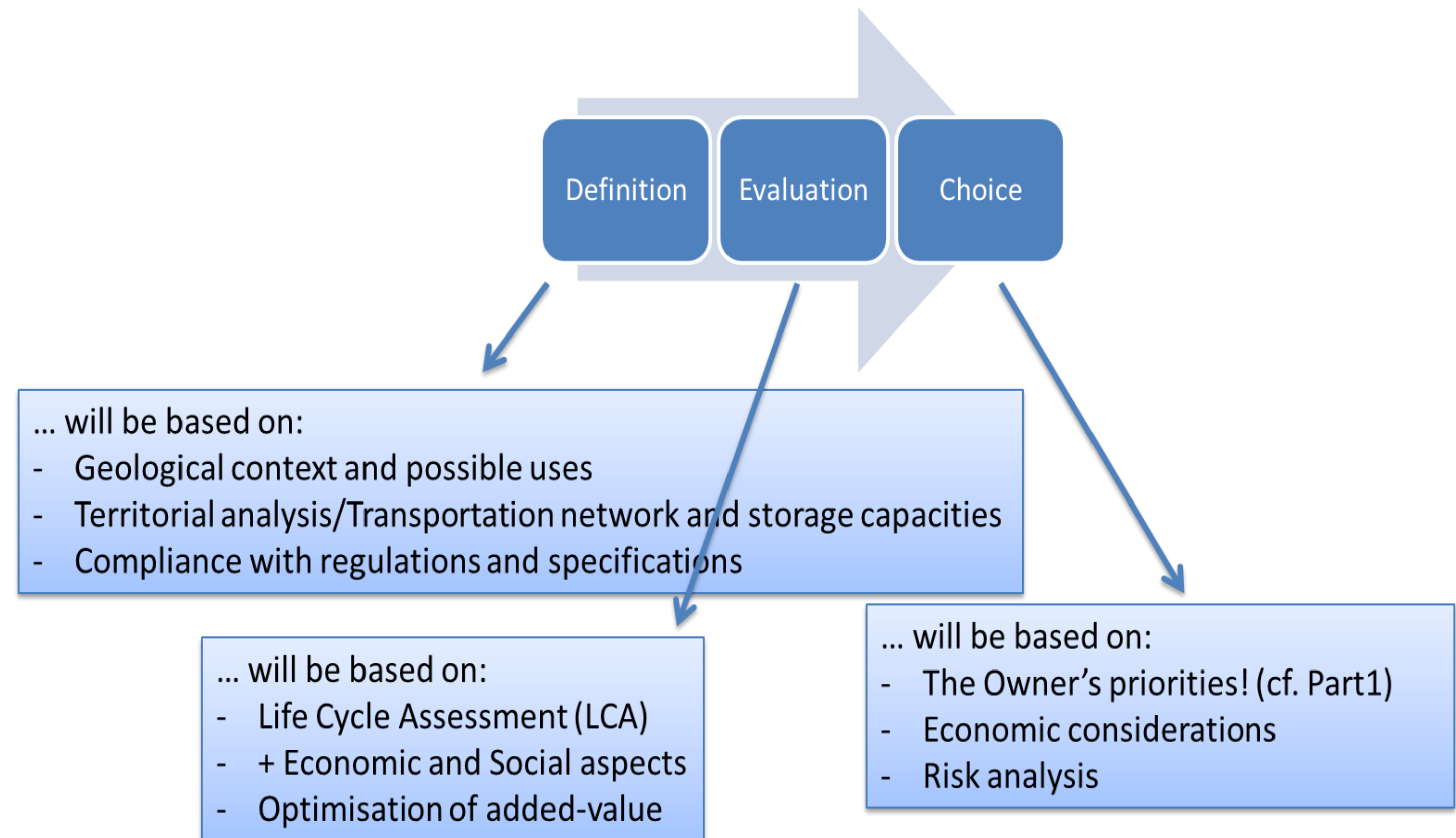
Predictive schedule and inventory of excavated materials

Evaluation of excavated materials use

Planned excavated material use

Strategy for construction contracts with regards to excavated materials

The excavated materials management scenarios



Part 4

4. Innovative roadmap and action plan

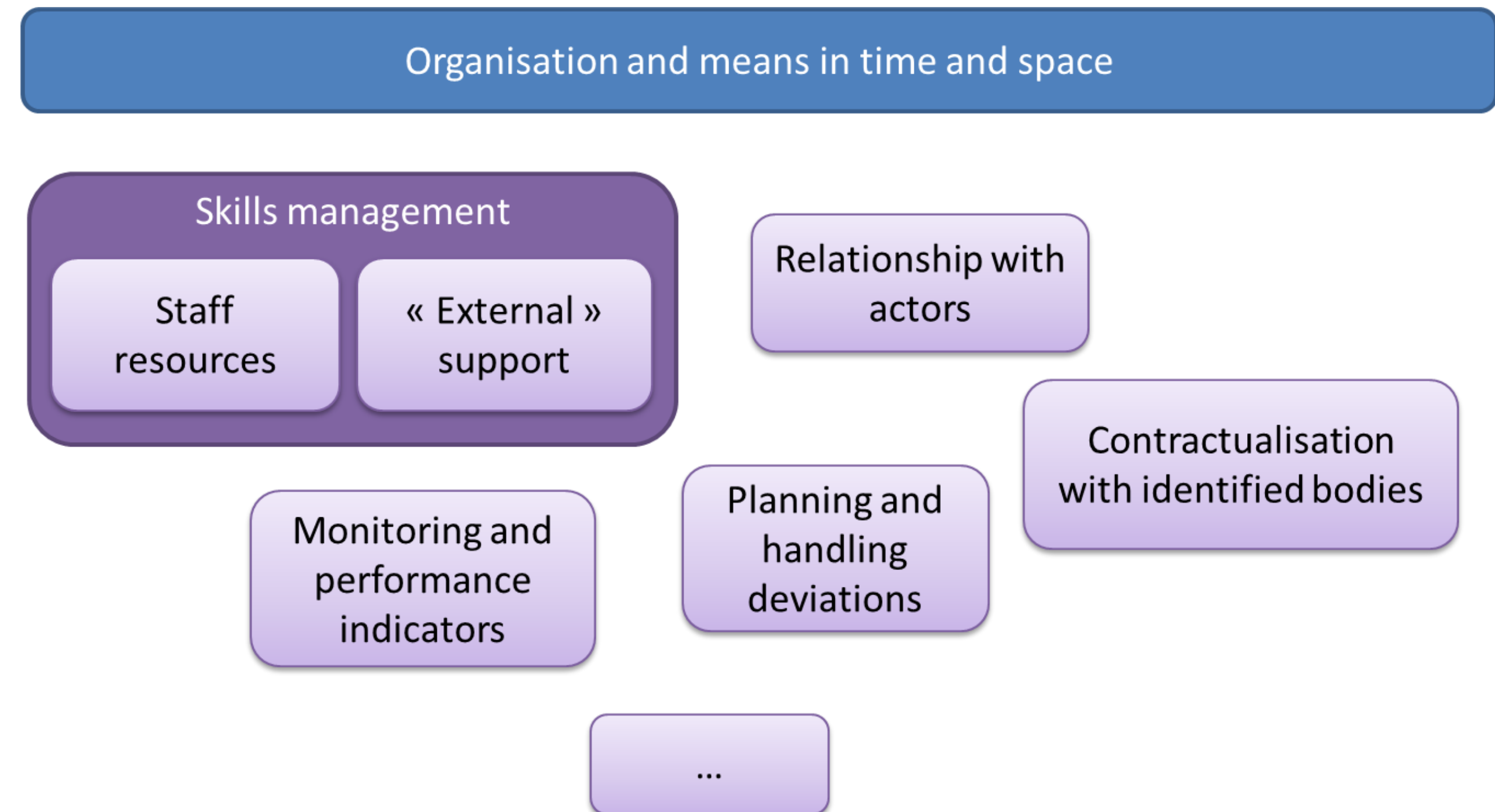
Predictive schedule and inventory of excavated materials

Evaluation of excavated materials use

Planned excavated material use

Strategy for construction contracts with regards to excavated materials

Action plan



Matex in FCCIS

Definition of interfaces with other working groups

- Environmental evaluation
- Placement optimisation
- Civil engineering
- Safety

Consolidation of the current draft for the guidelines

- Revision and agreement on the structure of the chapters.
- Definition of a common French and Swiss documentation framework.

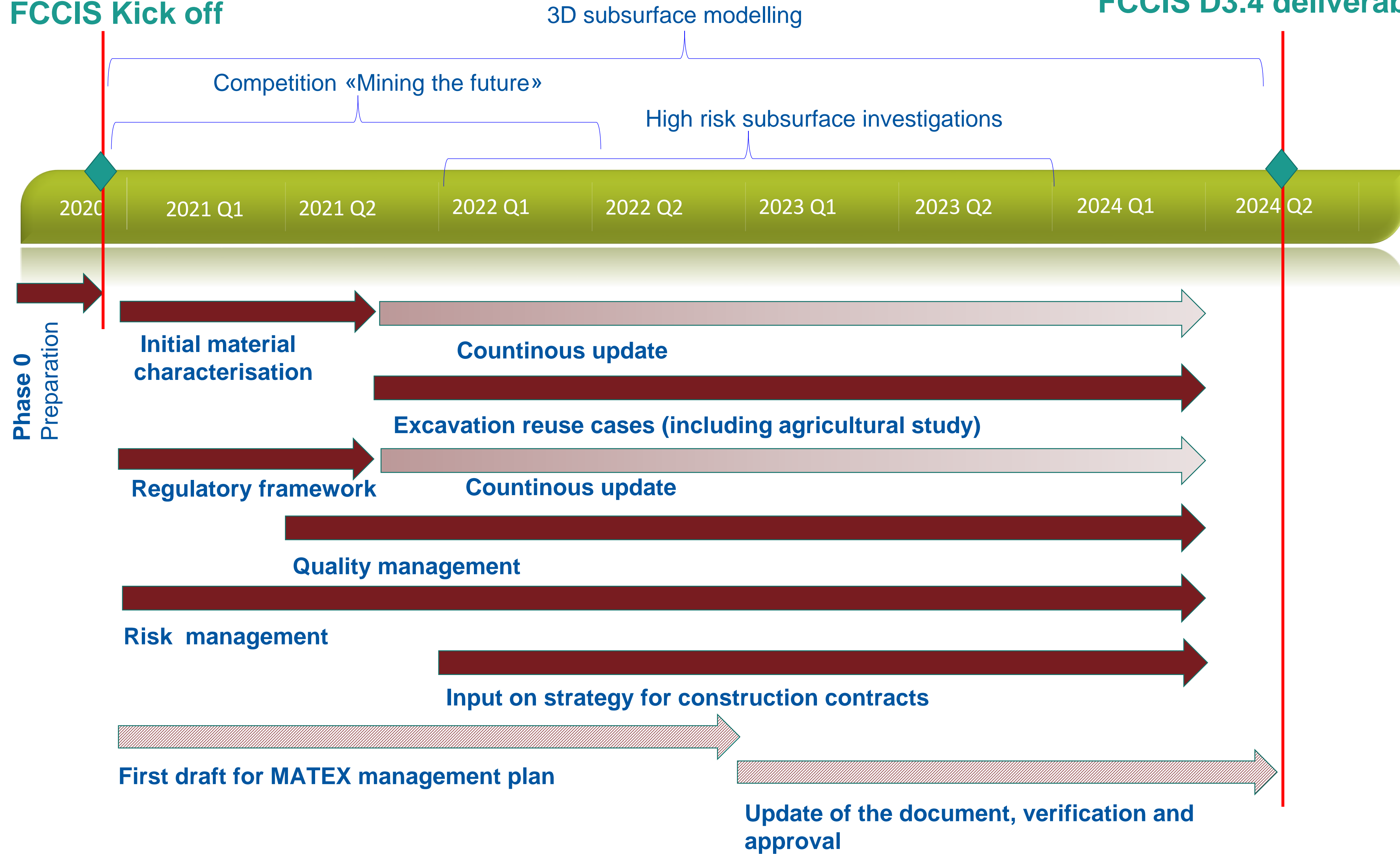
Preliminary excavated material management plan

- Definition of the content of the document
- Strategy adopted by the project owner and the implementation of this strategy within the scope of the FCC

Timeline of Matex in FCCIS

FCCIS Kick off

FCCIS D3.4 deliverable



Legend:

-  Documentary effort
-  Activity



Thank you
for your attention.