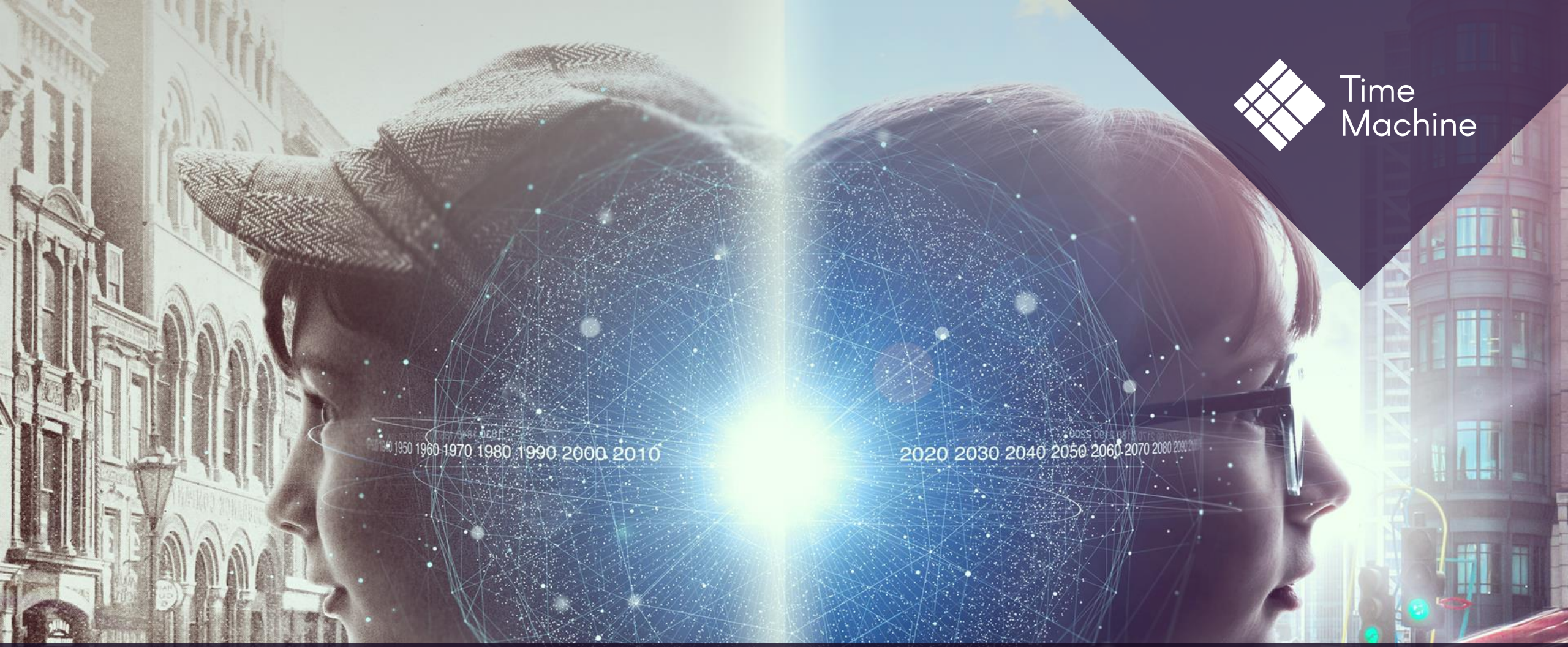


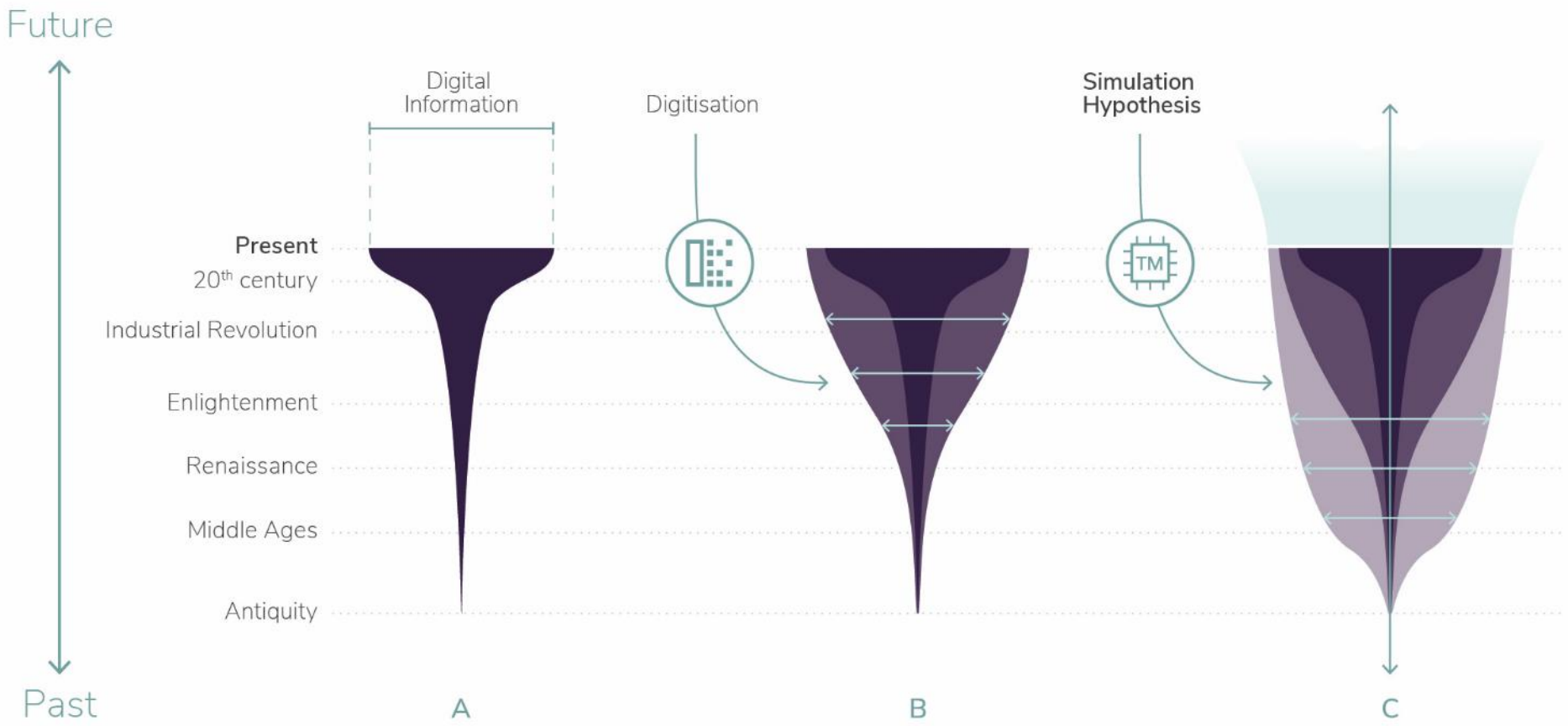
Time Machine

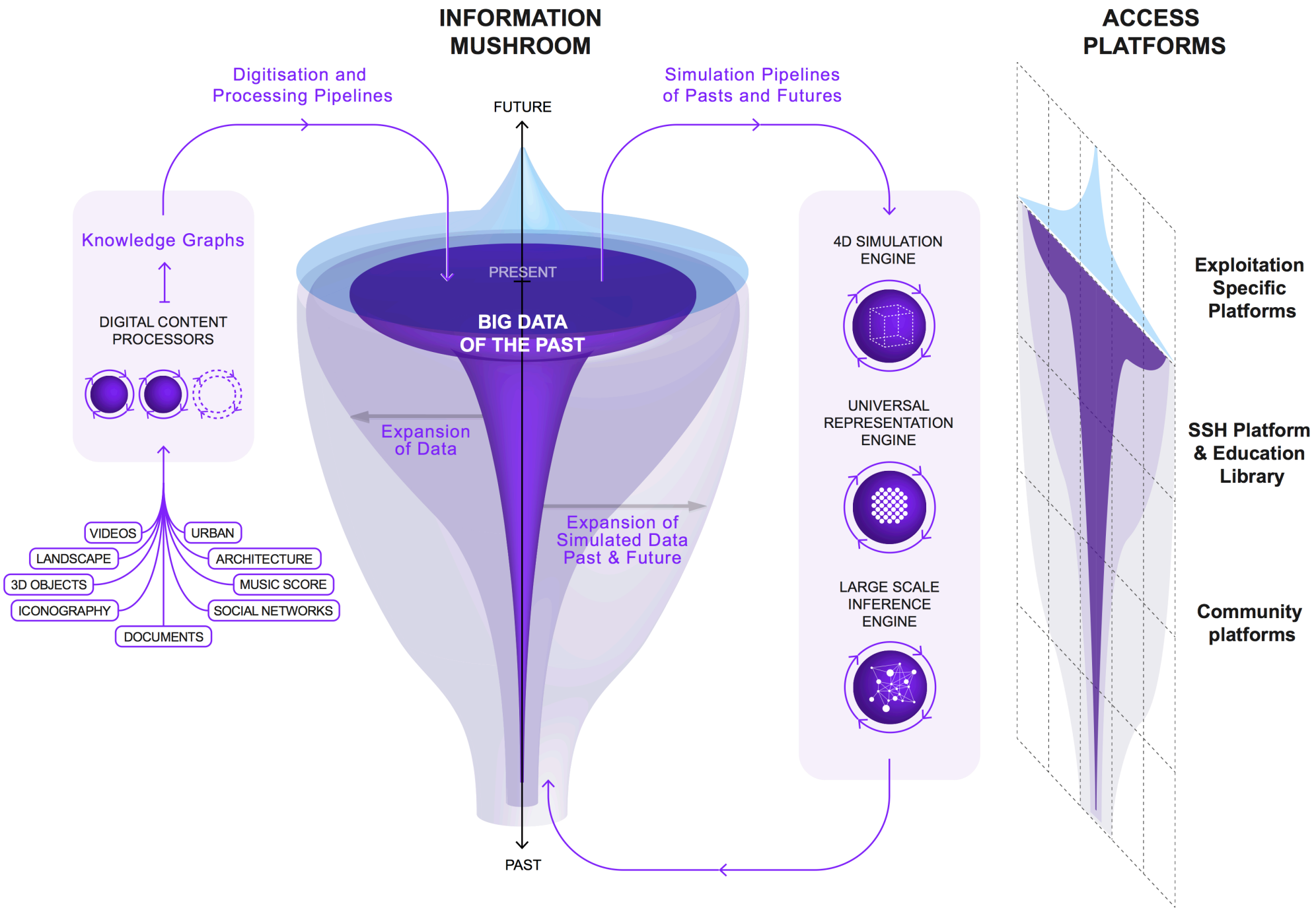
Time Machine Organisation

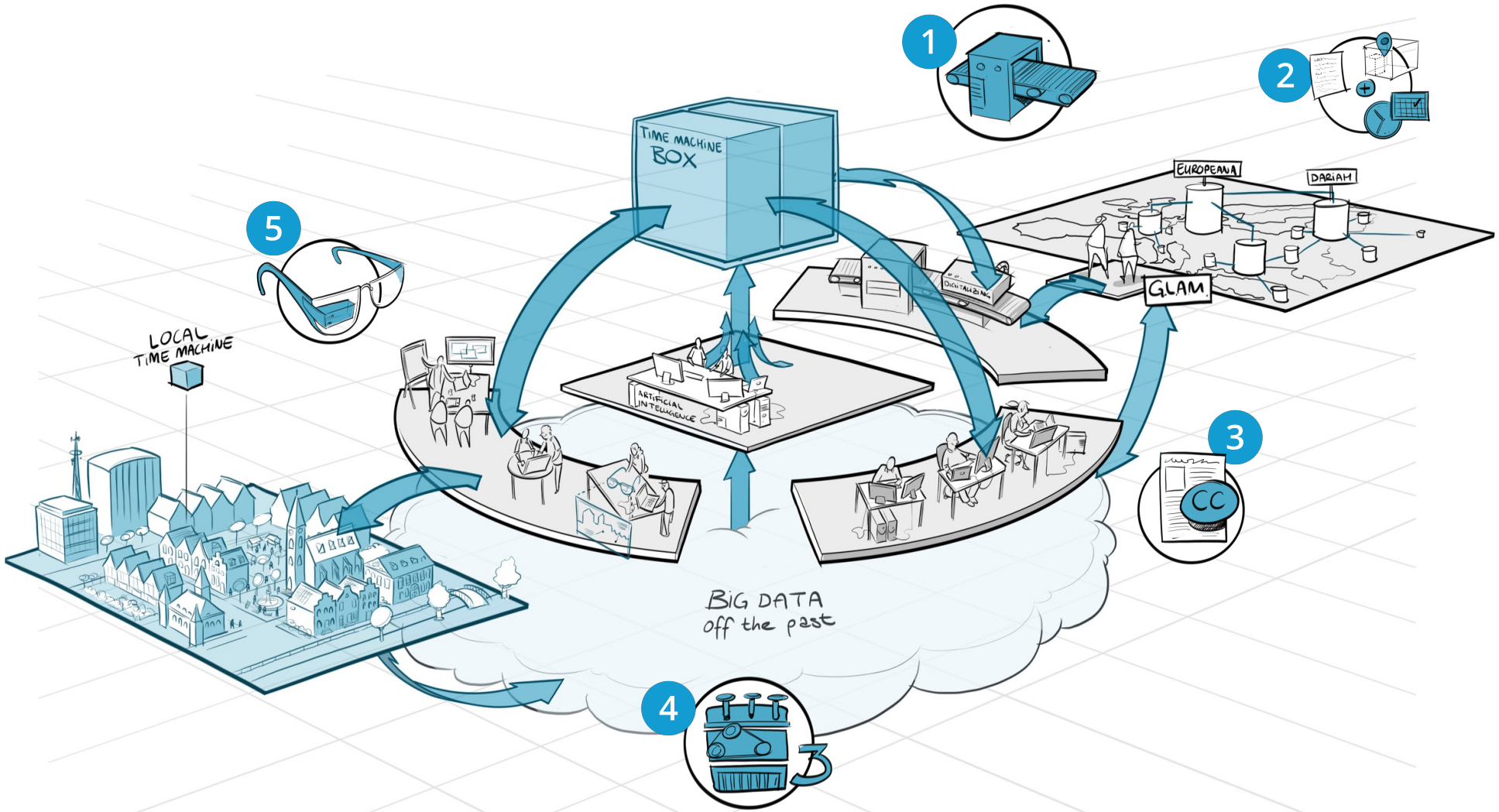
26.10.2020

Webinar #3 Time Machine Agenda and RFC

Time Machine




INFORMATION MUSHROOM
ACCESS PLATFORMS
Digitisation and Processing Pipelines
Simulation Pipelines of Pasts and Futures
FUTURE
PRESENT
BIG DATA OF THE PAST
PAST
Knowledge Graphs
DIGITAL CONTENT PROCESSORS
VIDEOS
URBAN
LANDSCAPE
ARCHITECTURE
3D OBJECTS
MUSIC SCORE
ICONOGRAPHY
SOCIAL NETWORKS
DOCUMENTS
Expansion of Data
Expansion of Simulated Data Past & Future
4D SIMULATION ENGINE
UNIVERSAL REPRESENTATION ENGINE
LARGE SCALE INFERENCE ENGINE
Exploitation Specific Platforms
SSH Platform & Education Library
Community platforms



Core Components

Data Graph

4D Map

Code Library

Projects Repository

Insertion

Data

Apps

Operators

Creation

Extraction

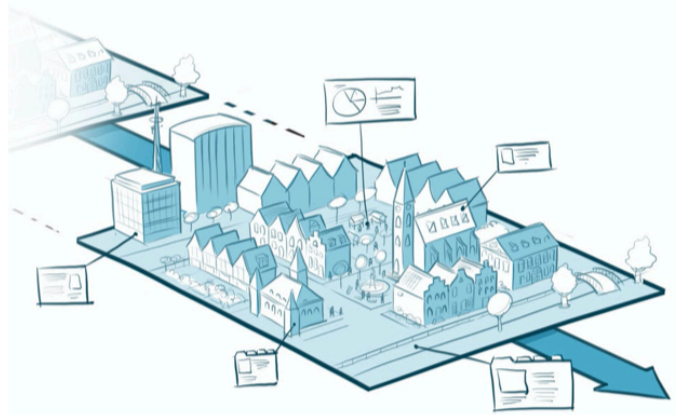
Mining

Project

Source

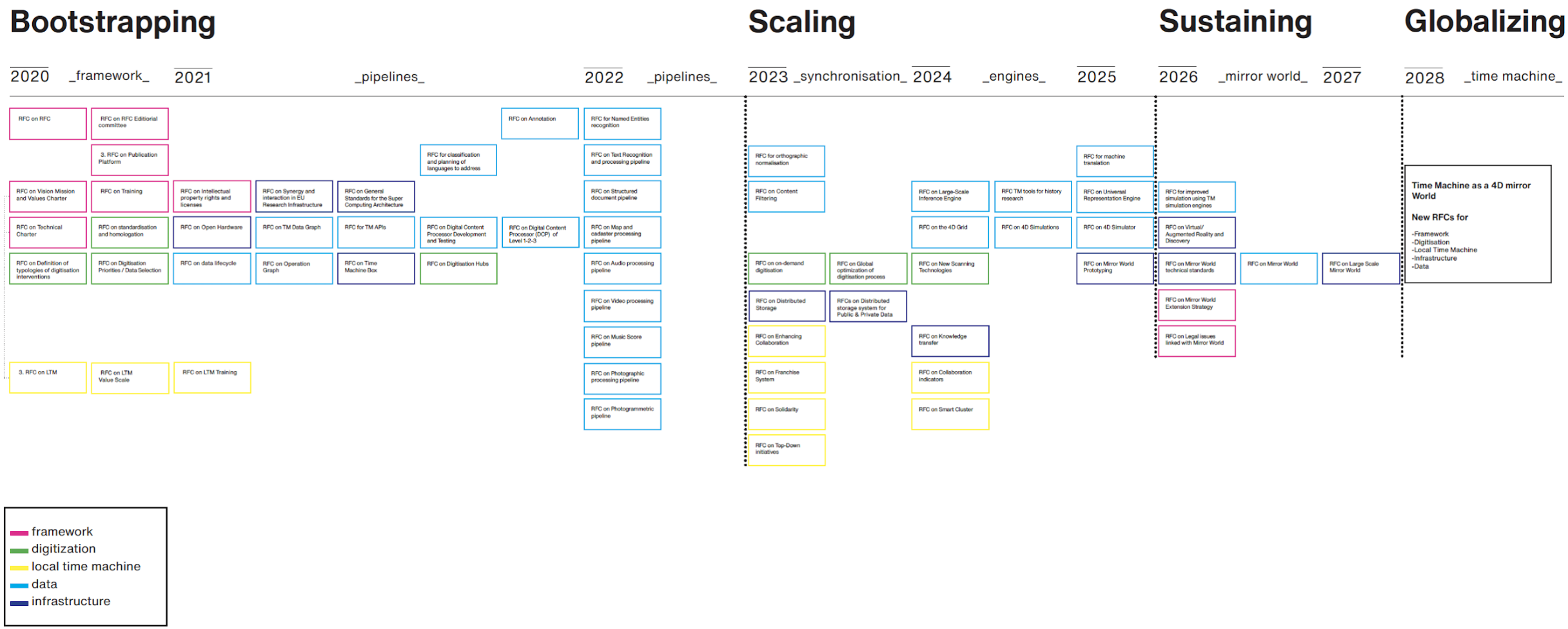
Municipality in Project's Zone of Coverage

Local Time Machine focused on a Municipality

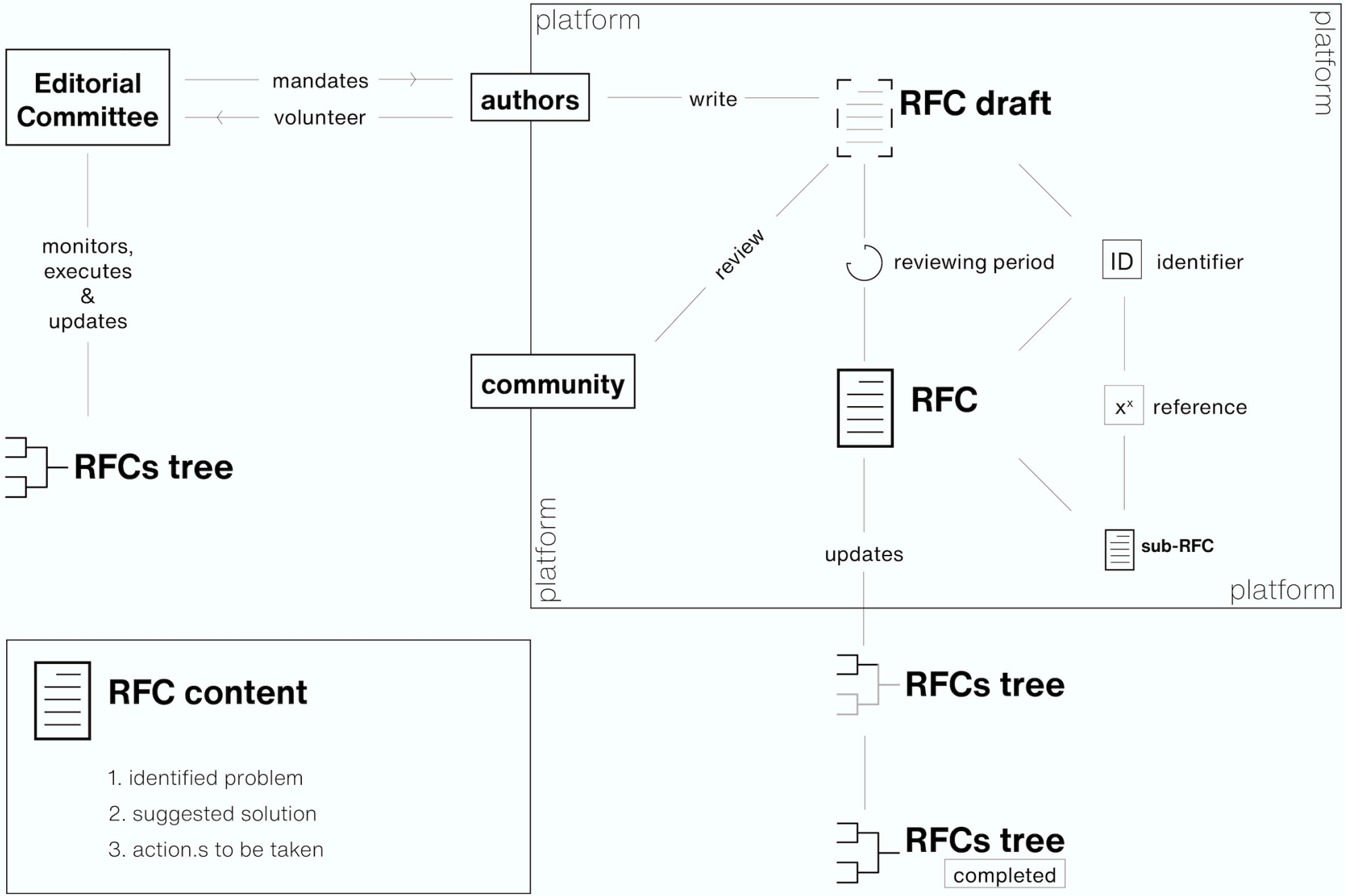


Time Machine

The Time Machine methodology takes inspiration from the core design principle of the Internet: The *Request for Comments*



68 RFCs Planned


platform
Editorial Committee
mandates
volunteer
authors
write
RFC draft
platform
monitors, executes & updates
review
reviewing period
ID
identifier
community
RFC
x^x
reference
RFCs tree
updates
sub-RFC
platform
platform
RFC content
1. identified problem
2. suggested solution
3. action.s to be taken
RFCs tree
RFCs tree
completed

Time Machine

Requests for Comments

This repository is the main location for work on and release of finalised Time Machine *Request for Comments*.

Drafts in preparation

ID	Title	Draft pull request
RFC-0004	RFC on the RFC Editorial Committee	New version of RFC-0004
RFC-0005	RFC on LTM	Current draft of RFC5

Current open drafts

ID	Contribution deadline	Main file
RFC-0000	2020-11-08	RFC-0000.md
RFC-0001	2020-11-08	RFC-0001.md
RFC-0002	2020-11-08	RFC-0002.md
RFC-0003	2020-11-08	RFC-0003.md

https://github.com/time-machine-project/requests-for-comments

RFC-0000: RFC on RFCs

Motivation

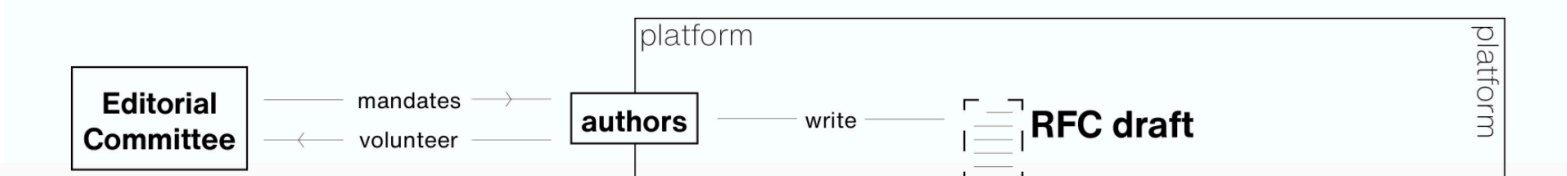
Reaching consensus on the technology options to pursue in a programme as large as Time Machine is a complex issue. To ensure open development and evaluation of work, a process inspired by the Request for Comments (RFC) that was used for the development of the Internet protocol is being adapted to the needs of Time Machine. Time Machine Requests for Comments are freely accessible publications, identified with a unique ID, that constitute the main process for establishing rules, recommendations and core architectural choices for Time Machine components.

Approach

The Time Machine RFC are based on the following principles

1. Accessibility. **RFCs** are freely accessible, at no cost.
2. Openness. Anybody can write an **RFC**.
3. Identification. Each **RFC**, once published, has a unique ID and version number. It can nevertheless be revised over time as a living document, being republished with the same ID and a different version number.
4. Incrementalism. Each **RFC** should be useful in its own right and act as a building block for others. Each **RFC** must be intended as a contribution, extension or revision of the Time Machine Infrastructure.
5. Standardisation. **RFCs** should aim to make use of standardised terms to improve the clarity level of its recommendation.
6. Scope. **RFCs** are designed contributions and implementation solutions for solving practical problems. **RFCs** are not research papers and may not necessarily contain experimental evidence. RFCs cover not only the technical infrastructure but the data standards, legal frameworks, and values and principles of Time Machine.
7. Self-defining process. As used for the development of the Internet, **RFCs** are the main process for establishing Time Machine Infrastructure and Processes and also the processes and roles for managing **RFCs** themselves.

RFC Publication Process



RFC-0001: Time Machine Glossary

Purpose

The Time Machine Glossary's function is to provide clear definitions of the terms used in the RFCs and throughout related Time Machine documentation. It should be updated regularly as new RFCs are introduced and published.

Glossary

4D Map

The **4D Map** is a core element of the Time Machine which is used to locate resources, services and reconstructions. The **4D map** is both the map where activities can be followed and the map that aggregates results. It is used for plotting **Local Time Machines** in particular. The density of the 4D Maps is not uniform, in particular some zones may be modelled only in 3D, 2D and even 1D, such as a list of included elements.

4D Simulator

The **4D Simulator** is one of the Time Machine **Engines**. The **4D Simulator** manages a continuous spatiotemporal simulation of all possible pasts and futures that are compatible with the data. The **4D Simulator** includes a multiscale hierarchical architecture for dividing space and time into discrete volumes with unique identifiers. It is a simulation engine for producing new datasets based on the information stored, and each possible spatiotemporal multiscale simulation corresponds to a multidimensional representation in the 4D computing infrastructure. When a sufficient spatiotemporal density of data is reached, it can produce a 3D representation of the place at a chosen moment in History. In navigating the representation space, one can also navigate in alternative simulations of the past and future. Uncertainty and incoherence are managed at each stage of the process and are directly associated with the corresponding reconstructions of the past and the future.

Annotators

Annotators are dedicated **Apps** for annotating images and documents

App

An application, either web-based or not, that performs operations on Time Machine **Components**. **Apps** can be developed by the **Time Machine Organisation** or by third parties. **Apps** are pieces of software (in general built as part of official **Projects** but not necessarily) that enables users to experience and edit the information in the **Data Graph** and the **4D Map**. They can be grouped

RFC-0002: RFC on RFC Tree

Motivation

The process for writing RFCs requires long-term planning instruments which will enable writers to not only access constantly updated versions of current RFCs but also to have a view on future planned RFCs. The **RFC Tree** as described in this RFC will provide an up-to-date description of all planned RFCs, including a short textual motivation for each and listing their dependencies with other RFCs.

Definition

RFC Tree is the metaphorical description and the hierarchical representation of the **Time Machine Request for Comments** development plan that will be used as a baseline scenario to help monitor the progress and achievements towards completion of the **Time Machine Horizon** over the coming 10 years.

Behavior

While the **RFC Tree** itself results from the progressive completion of RFCs over time, it also acts as a blueprint for defining the incremental steps used to build the Time Machine Infrastructure.

RFC Tree behaves as a body of law for Time Machine, containing all RFC documentation and documenting the production process, as well as a progress indicator showing the progress of upgrades to Time Machine components in real time.

RFC Tree is a macro-architecture plan that shapes dependencies between RFCs. It could be divided into micro thematic or productive arcs, as each RFC belongs to a specific sequence and is classified in one of the following categories: Framework, Infrastructure, Data, Local Time Machines.

Singular RFCs are the basic units of the **RFC Tree**. The 70+ initial RFCs are listed at the end of this document. This initial set is an indicative path to completion of the **Time Machine Horizon** and may be expanded/modified/edited as needed. The tree-like structure and subsequent dependency chains which connect singular RFC guarantee that the **Time Machine Horizon** will be realised, as each RFC edit/removal/addition will cause dynamic adjustments and reorganisation.

This RFC provides the most up-to-date version of the **RFC Tree**.

RFC Planning

2020 (15 planned RFCs): RFC on RFCs, RFC on TM Glossary, RFC on RFC Tree, RFC on RFC Editorial Committee, RFC on Publication Platform, RFC on Local Time Machines, RFC on Technical Charter, RFC on Vision Mission and Values Charter, RFC on Intellectual Property Rights and Licences, RFC on Training, RFC on LTM Value Scale, RFC on LTM Training, RFC on Definition of Typologies of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Recruiting RFC Writers
Recruiting RFC Reviewers
Write to us : rfc@timemachine.eu

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timemachine.eu/trailer