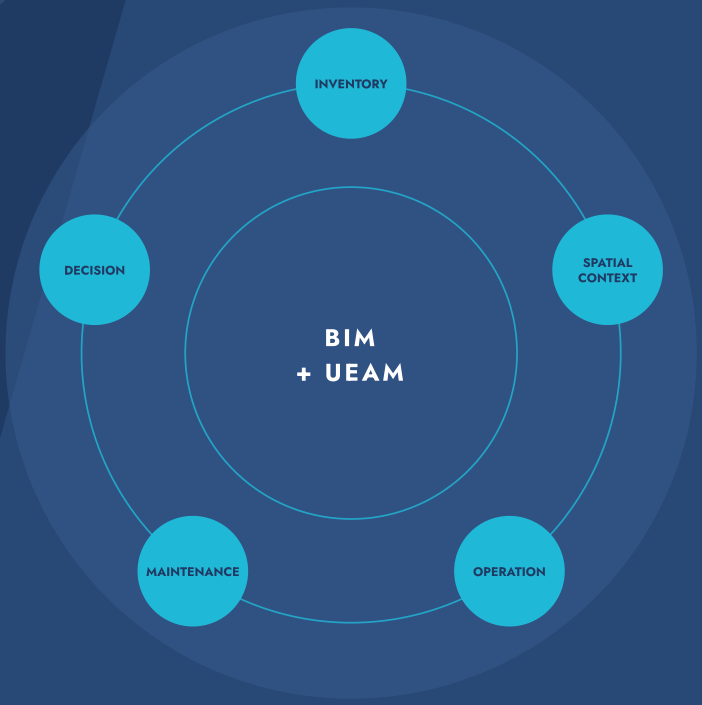
MOBIUS
THE RISK MANAGEMENT COMPANY



BUILDING AND CONSTRUCTION ASSET MANAGEMENT

MOBIUS BIM
The building model

Connected to inventory, maintenance and decision-making.

A MOBIUS UEAM extension for operating buildings across their entire lifecycle. BIM — Building Information Modeling; FM — management of buildings and support services.

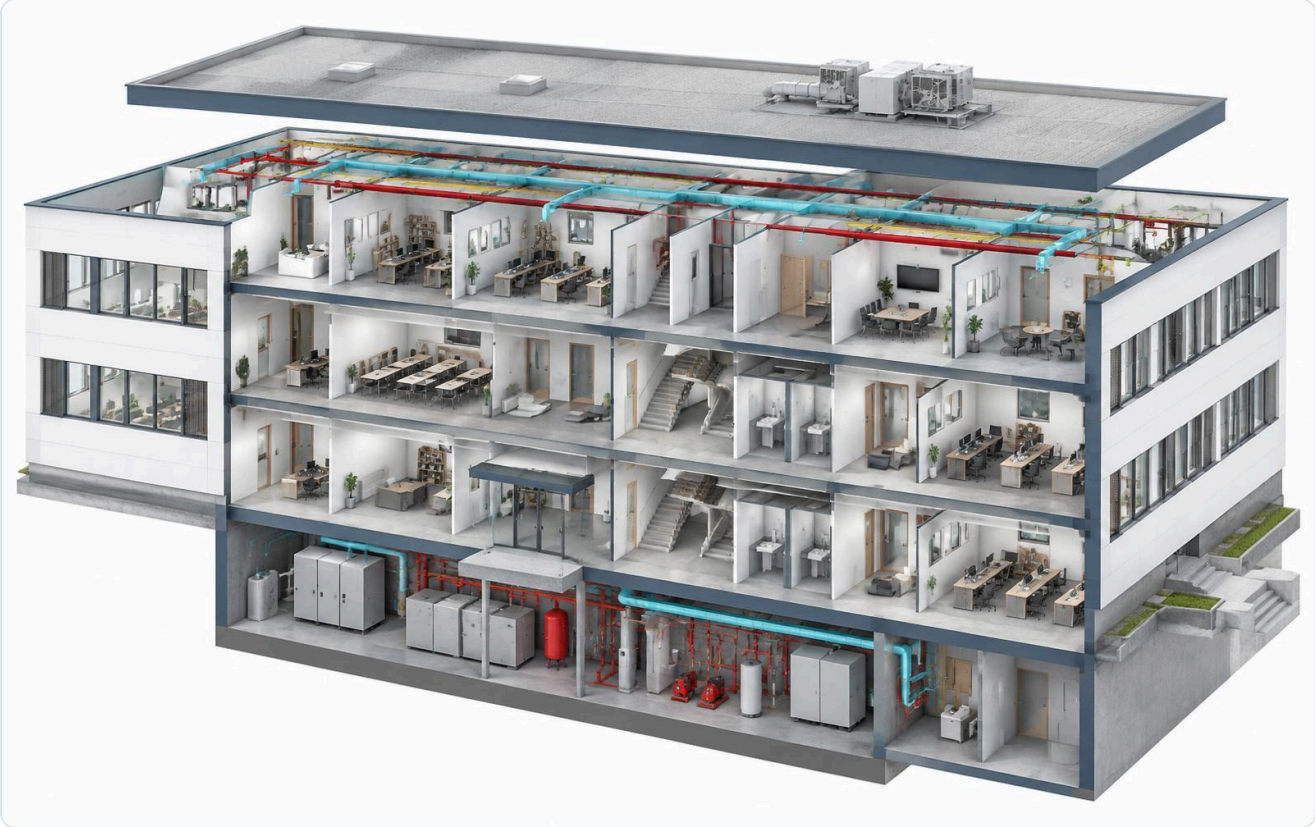
Inventory / spatial context / operation: an identity for each asset, a coherent view of spaces and systems, a common history for works, documents, resources and costs.

MOBIUS SOFTWARE · SOLUTION PRESENTATION

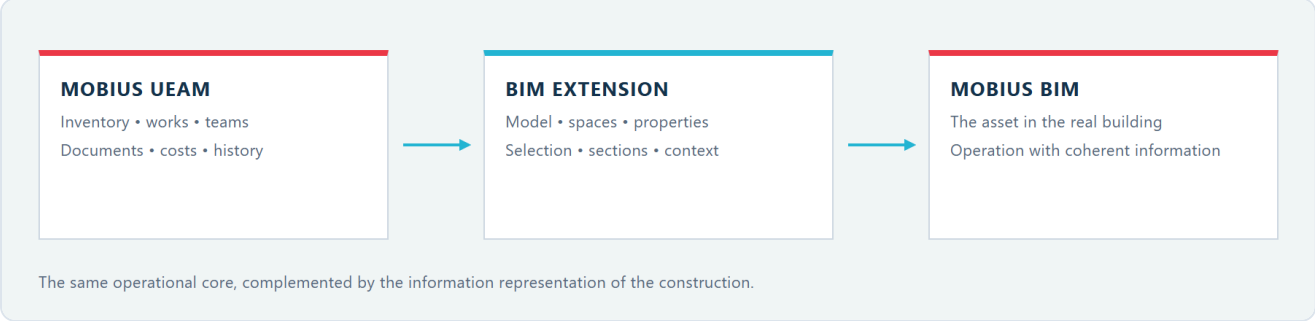
01 · POSITIONING

A building is not just a model. It is a set of assets in operation.

MOBIUS BIM extends MOBIUS UEAM — Unified Electronic Asset Management — with an information and visual layer dedicated to buildings and constructions. The geometric model becomes the context for the technical inventory, documents, maintenance, interventions and costs.



The building model connected to inventory, maintenance and decision-making: a three-dimensional section with spaces, installations and equipment.



Continuity between MOBIUS UEAM, the BIM extension and MOBIUS BIM.

BIM: information, not just geometry

BIM (Building Information Modeling) means the information modeling of constructions: a digital representation that associates properties, relationships and documents with geometry. In operation, its value lies in the verifiable link between the represented element and the real asset.

FM: managing the building in use

FM (Facility Management) refers to the management of buildings, spaces and support services. Applying BIM in this phase brings location, technical condition, responsibilities and works together in a common context.

Continuity with UEAM

The asset register, preventive plans, corrective works, dispatch, mobility and cost analysis remain the operational core. The BIM extension adds spatial navigation, model properties and element–asset association.

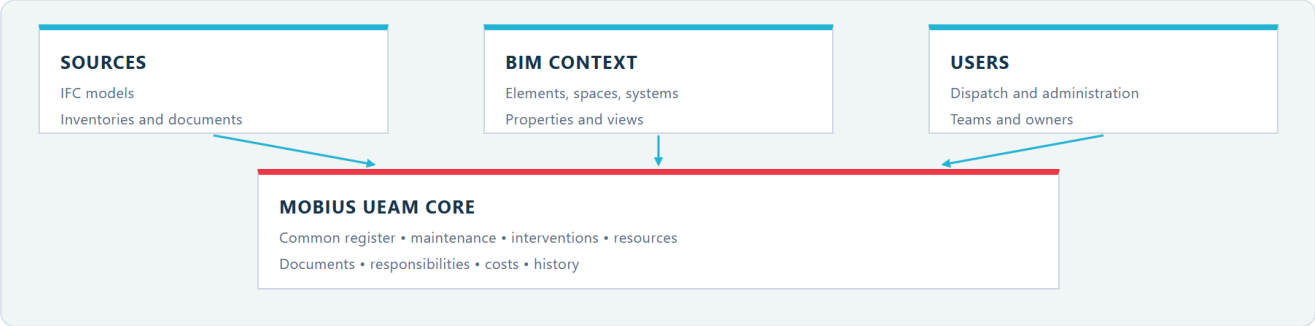
Solution presentation

It describes the proposed extension of UEAM; the availability of BIM functions and integrations is established in the analysis and implementation stage.

02 · ARCHITECTURE

A single operational register. Several ways to understand the building.

The BIM model, the map, the documents and the field application must all lead to the same asset record. No parallel inventory is created, isolated from maintenance.



Sources, BIM context and users all lead to the MOBIUS UEAM core.

The BIM layer

Model import, three-dimensional visualization, selection, filtering, properties, sections and measurements support the spatial identification of elements.

The MOBIUS UEAM core

Asset identity, classifications, plans, works, teams, documents, resources, costs and history are managed in the common operational model.

Controlled integration

MOBIUS BIM integrates open source libraries from the That Open Platform ecosystem, in particular That Open Engine and Fragments, for the BIM functions; asset registers and operating processes are provided by MOBIUS UEAM.

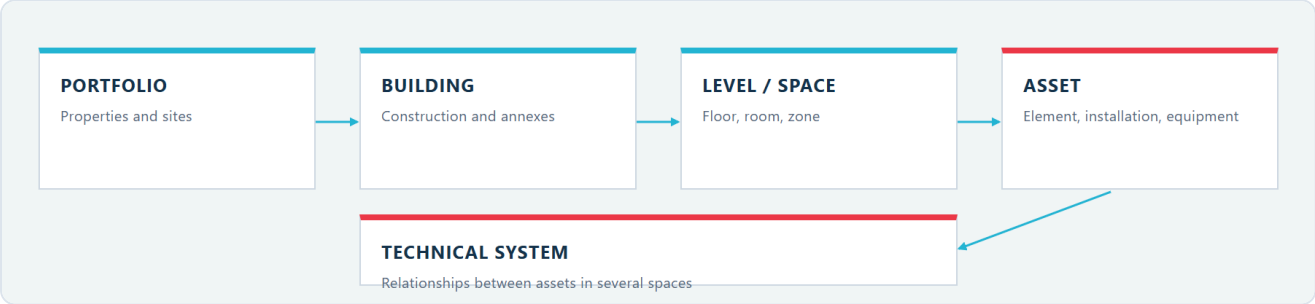
Configured in the project

Workflows, rights and interfaces with the organization's systems are configured in the project; operational functions are not provided automatically by the visualization engine.

03 · THE CONSTRUCTION INVENTORY

From portfolio to room, system and equipment.

The inventory covers the building as an asset, its construction components and the equipment used in it. Spatial organization and membership of a technical system are two distinct but complementary relationships.



From portfolio to room, system and equipment.

Spatial structure

Portfolio → site → building → level → room or zone. An installation can span several levels; its location should not be confused with belonging to a single space.

Construction elements

Structure, roof, facades, windows and doors, partitions, floors and external works. Type, materials, condition, documents and maintenance works are tracked.

Installations and equipment

Heating, ventilation, air conditioning, electricity, water and sewerage, elevators, access, furniture and specific equipment. Safety systems are inventoried without replacing their dedicated functions.

Level of detail

Not every geometric object has to become a maintenance asset. The level of detail is chosen according to operational usefulness, criticality and the cost of keeping data up to date.

04 · DATA PREPARATION

A usable model starts with data that can be verified.

Importing a model is not the same as handing over a complete inventory. Information for operation is checked, completed and correlated with reality in the field.

01 Import and verification

IFC (Industry Foundation Classes) is an open exchange format for construction models. Units, coordinates, levels, spaces, categories, properties and duplicate objects are checked before association with the inventory.

02 Stable identity

The BIM element is linked to the UEAM asset code through an explicit correspondence. The IFC identifier, source model and version are kept. An IFC identifier can change on re-export; the operational identity must not be lost.

03 Minimum set for operation

Asset code, name, class, location, system, condition, criticality, owner, manufacturer and serial number where available, documents, warranty and maintenance plan. Missing properties are marked as missing, not filled in by assumption.

04 Buildings without a BIM model

The UEAM inventory can be built before the model. Plans, documents and surveys are used in stages; the BIM representation is added for areas with operational value. Automatic conversion of drawings into complete models is not assumed.

Reconciliation on revision

When the model is revised, associations are reconciled before publication: added, removed or modified elements, with human verification and history kept.

05 · EXPLORING THE MODEL

See where the asset is. Understand which system it belongs to.

The BIM visualization proposed for the extension supports exploring the building directly in a web interface, alongside the operational register.

01 Visualization and selection

Navigating the model, selecting an element, highlighting it and consulting its properties. Filters by level, category or system reduce visual clutter and guide the user to the relevant area.

02 Sections and isolation

Section planes and isolation of elements make hidden installations, technical spaces and the relationships between components understandable. Saved views can capture the context of a finding.

03 Measurements and properties

Geometric tools allow indicative measurements of distances and areas, within the limits of the available model. Properties and classifications are read from the model data, not inferred from its visual appearance.

04 Context, not a replacement for design

The extension is intended for operation. Automatic checking of all clashes, structural calculation or energy simulation are not assumed. Performance is tested on the client's real models.

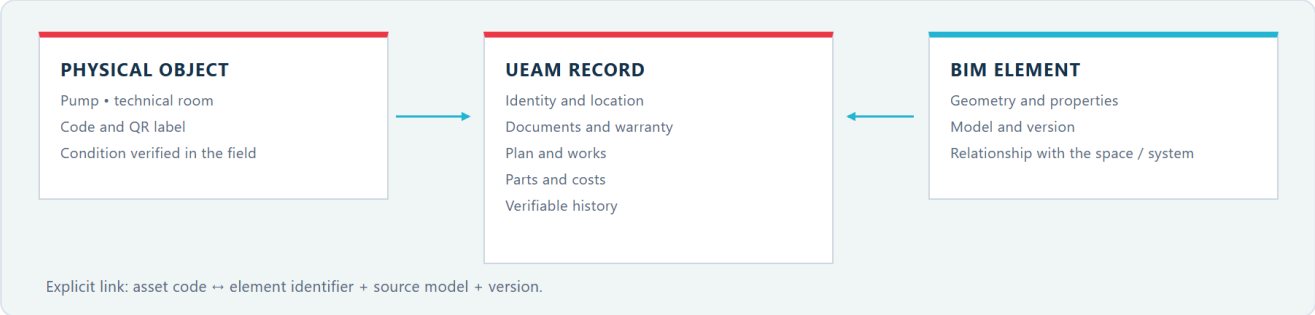
Measurement limits

Measurements from the model do not replace surveys and field checks. Accuracy depends on geometry, units, version and the quality of the source data.

06 · THE ASSET RECORD

The element in the model and the object in the field share the same story.

The asset record is the common point of operation. It can be opened from the inventory, by selecting the BIM element or by physically identifying the equipment.



The physical object, the UEAM record and the BIM element share the same identity.

Identity and context

Name, code, category, building, level, room, system and owner. The reference to the model completes the location; equipment without its own geometry remains manageable in the register.

Documentation and condition

Technical data sheet, instructions, warranties, reports, photos and findings. Technical condition and inspection date are distinct from the geometric properties in the model.

History and costs

Plans, work orders, parts, labor, services and confirmations are associated with the asset. Replacing a piece of equipment keeps traceability between the retired asset and the new one.

Illustrative example: a circulation pump in the basement is associated with the heating installation, a technical room and the corresponding BIM element; the operational code remains the reference point for its history.

07 · MAINTENANCE

Maintenance is a controlled process, not a color in the model.

The model provides location and technical context. MOBIUS UEAM handles the planning, execution, resources and history of interventions.

01 Preventive plan

Operations, frequency, owner, competences, parts and documents associated with each asset class. Deadlines derive from instructions, procedures and applicable obligations, not from BIM geometry.

02 Corrective work

A finding is assessed by criticality and impact. The work receives a priority, deadline and team. The model view helps with location and preparing access, without guaranteeing diagnosis of the fault.

03 Execution and confirmation

The team records operations, parts, consumption, duration, photos and the result. Technical confirmation and administrative closure are carried out according to the configured responsibilities.

04 Examples of classes

Pumps and ventilation units: functional checks; roofs and facades: condition inspections; boards and lighting: works according to procedures; furniture: inventory, repair and replacement.

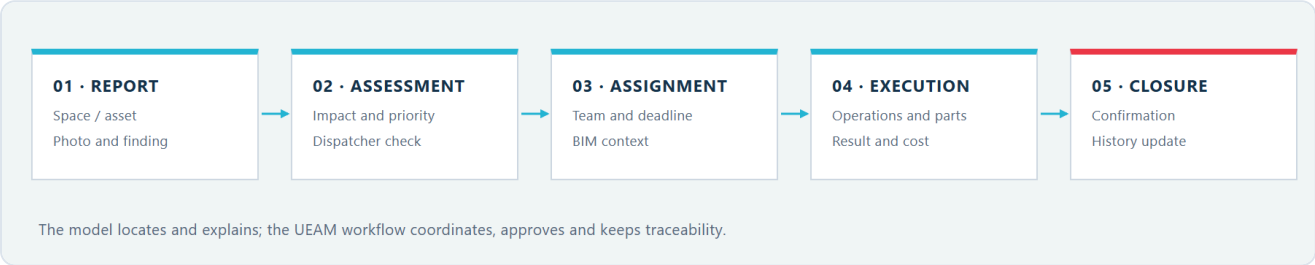
Overdue works in the model

Highlighting assets with overdue works in the model is a configurable BIM–UEAM link function; the status is read from validated operational data.

08 · DISPATCH

From a located report, a traceable intervention.

Dispatch brings together the incident, the asset, the building context and the team. The model shortens identification of the area, and the operational flow keeps accountability for each stage.



From a located report to a traceable intervention.

Location and assessment

The report indicates the affected space, asset or zone, with photos and a description. The dispatcher checks the information, the impact on the use of the building and the access conditions.

Assignment and tracking

The work is assigned to the right team, with a deadline, documents and a context view. Progress, delays and blockers are tracked in UEAM; the model does not replace the coordination of people.

Technical collaboration

BCF (BIM Collaboration Format) is a format for exchanging issues and viewpoints associated with the model. A BCF finding can be linked to a report or work; importing it does not automatically create an approved work order.

Closure

Closure keeps the finding, the BIM context, the operations, the costs and the confirmation together. Responsibilities and approvals are set by the organization.

09 · FIELD AND PORTFOLIO

From the map into the building. From the building to the asset.

GIS (geographic information system) provides the external context of the portfolio; BIM provides the internal and technical context of each construction.

01 Building portfolio

The map brings together sites, buildings, external works and teams. The inventory makes it possible to compare condition, works and costs between properties without artificially standardizing their particularities.

02 Physical identification

The mobile component of the application uses QR (scannable two-dimensional code) and NFC (near-field identification), providing access to the asset record where labeling is possible. The physical object, the inventory and the model are reconciled during checks.

03 The UEAM mobile app

The Android app supports consulting information, scanning, photos, findings and work confirmation. BIM visualization on mobile devices is sized and verified separately, according to model size and device.

04 Location limits

Navigating the model does not automatically provide precise indoor positioning. Locating people, offline availability and data synchronization are separate requirements, to be defined and tested during implementation.

Access and data protection

Access to data is granted by role, site and responsibility. Plans, documents and the configuration of sensitive equipment require adequate protection.

10 · THE LIFECYCLE

Information has to survive the handover of the building.

MOBIUS BIM links design and construction information to day-to-day operation and to decisions on renovating, replacing or retiring assets.



Information follows the building through its entire lifecycle.

Handover for operation

The model describing the as-built situation, the equipment list, documents, warranties, locations and responsibilities are checked. Information acceptance is not to be confused with the technical or legal acceptance of the construction.

Controlled updating

Changes of location, replacements and modifications to installations produce operational updates and, where necessary, model revisions. Publication takes place after the element–asset links are reconciled.

Renovation and decisions

The history of faults, costs, risk and downtime supports the prioritization of investments. Versions and documents keep the previous context; a new model must not erase the operational memory.

Mandatory documents

The building's technical book and mandatory documents continue to be managed according to the applicable requirements. The BIM model can organize and contextualize them, but does not replace them.

11 · SYSTEMS AND CONSUMPTION

Measured data makes sense when it is linked to spaces and assets.

Connecting to existing systems can add statuses, alarms and consumption to the building context. Integration depends on protocols, access, instrumentation and data quality.

01 Context for installations

The BMS (building management system) can provide operating data through agreed interfaces. Meters and sensors are associated with the appropriate assets, zones and technical systems.

02 Consumption analysis

Electricity, heat or water consumption is tracked according to the available measurement points. Reporting by space or system requires an explicit allocation method; geometry does not create real sub-metering.

03 From signal to work order

A validated alarm can trigger a report, under the established rules. Before assignment, the meaning, source and recurrence of events are checked, to avoid needlessly multiplying work orders.

04 Functional limits

The solution does not replace certified protection, automation or safety systems. Visualizing data does not imply controlling installations; any command requires a separate design, rights and checks.

Results from real data

No percentage savings or native energy simulations are promised. Results are established from real measurements and documented interventions.

12 · USAGE SCENARIOS

The same asset logic, adapted to each construction.

The common model is suitable for individual buildings, campuses and distributed portfolios. Configuration takes into account use, criticality and responsibilities.

Administrative building

Installations, offices, technical spaces, furniture and external works. An air-conditioning fault is associated with the unit, the spaces served and the remedial work, if the relationships are documented.

School or campus

Teaching buildings, gym and sports grounds, furniture, teaching equipment, perimeter lighting and installations. Interventions are scheduled in line with the use of spaces and access rules.

Hospital or building with critical functions

Maintenance of installations is coordinated with the affected zones and services. Planning of access and shutdowns is approved by those responsible; the model does not on its own determine the continuity of services.

Related constructions and facilities

Car parks, warehouses, annexes, site networks and construction components of other properties. The BIM scope and model quality are checked for each type of construction; coverage of all types is not assumed.

Configuration scenarios

The examples describe configuration scenarios, not projects already implemented. The specialized functions and integrations needed are confirmed for each client.

13 · OPERATIONAL CONTROL

Decisions are based on the history of assets, not just on the 3D image.

Reports connect technical condition, works, costs and data quality. Filtering by building, level, system or asset class allows analysis at the appropriate scale.

01 Condition and risk

Assets with faults, repeated findings, critical components and zones with operational impact. Criticality criteria and risk assessment are approved by the organization.

02 Execution and resources

Preventive deadlines met, overdue works, reaction time, time to closure, tasks per team, parts and services used.

03 Cost per asset and property

Documented costs per asset, system, building and period. Budgets and investments are compared only using agreed data and accounting rules; the model does not automatically calculate asset value.

04 Quality of the BIM–UEAM inventory

The degree of completion of mandatory fields, assets linked to the model, unvalidated links, missing documents and unreconciled changes. Indicators must specify the numerator, base and period.

Control dashboard

A control dashboard can highlight the areas that need attention. Colors in the model reflect statuses calculated from operational data; they do not represent a technical expert assessment of the construction.

14 · IMPLEMENTATION

A well-chosen pilot before extending to the portfolio.

Implementation starts with the operational objectives and verification of data sources. The most detailed model is not automatically the most useful for maintenance.

1 Analysis and data conventions

The priority processes, asset classes, roles and sources are chosen. The mandatory fields, level of detail, codes, documents and the owner of each update are established.

2 Inventory and correlation

Data is taken over, the model is verified and the element–asset correspondence is built. The list of exceptions and assets without a model are handled explicitly, through field checks.

3 Operational pilot

A representative building or system goes through the complete flow: selection in the model, access to the record, report, assignment, execution, cost, closure and reading the result in the history.

4 Acceptance and extension

Import, performance on real devices, rights, workflows, documents and model revision are tested. Extension follows after training and acceptance of the pilot results.

Deliverables

A reconciled inventory, data conventions, validated models, configured workflows, operating documentation, training and acceptance criteria. The schedule is set after assessing the real data.

15 · MILESTONES AND OUTCOME

A living record of the building, connected to day-to-day work.

MOBIUS BIM applies the discipline of asset management to construction information: clear identity, understandable location, explicit responsibilities and verifiable history.

ABBREVIATIONS USED

BIM	Building Information Modeling.
FM	Management of buildings and support services (Facility Management).
UEAM	Unified Electronic Asset Management.
IFC	Open exchange format for models (Industry Foundation Classes).
BCF	Exchange of issues and views associated with the model (BIM Collaboration Format).
GIS	Geographic information system.
QR	Scannable two-dimensional code.
NFC	Near-field identification.
BMS	Building management system.

Limits of use

The model must be maintained and checked against the field. The solution does not replace design, technical expertise, authorized inspections, mandatory documents or safety systems. New functions are validated through a pilot before operational use.

MOBIUS
THE RISK MANAGEMENT COMPANY

LET'S TALK ABOUT YOUR BUILDINGS

From the existing inventory to controlled operation.

From the existing inventory to the information model and controlled operation: a phased path, adapted to your portfolio and teams.

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