SBS Lift Forum on BIM in the lift sector

27th May 2021

An introduction to BIM Building Information Modeling

Online Meeting

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EFESME

European Federation for Elevator Small and Medium-sized Enterprises aisbl

ABOUT US

KREA

It is a network of professionals and companies that offers services for the innovation of client companies, through the development of products, services, sectors, in the healthcare and construction sectors, but not only, also through the creation of physical and virtual environments, integrating knowledge and internal Krea skills with those of the client companies.

Excellence International Consulting

It is a company providing support services to businesses in the internationalization process. The company, specialized mainly in Arab countries, but also with experience in the markets of India, Turkey, China, Russia and Africa, offers consultancy, market analysis, counterpart research, promotion and more. By defining the most effective strategy together with the client, we accompany him from the handshake to the signing of the contract.

The U.F.A. division was born from the synergy between Exellence and Krea in 2020 - Units for First Aid for Covid-19, thanks to which Triage First Aid was designed and built in modular solutions for Covid-19.
Visit the website: www.firstaidunit.com

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U.F.A (UNIT FOR FIRST AID)
MODULAR SOLUTIONS FOR HEALTHCARE SECTOR
CASE HISTORY

Design and construction of the Covid Emergency Department - 19
Vignola Hospital

NEED

First Aid for diagnosis of COVID-19 with isolation zone

SOLUTION

- 10 environments
- negative pressure gradients
- air disinfection system
- layout specifically designed to minimize the risk of contamination of patients and operators




INTRODUCTION TO BIM
1°Level

THE BIM IN THE ERA OF INNOVATION AND DIGITALIZATION

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BIM: From real to virtual

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BIM: From real to virtual

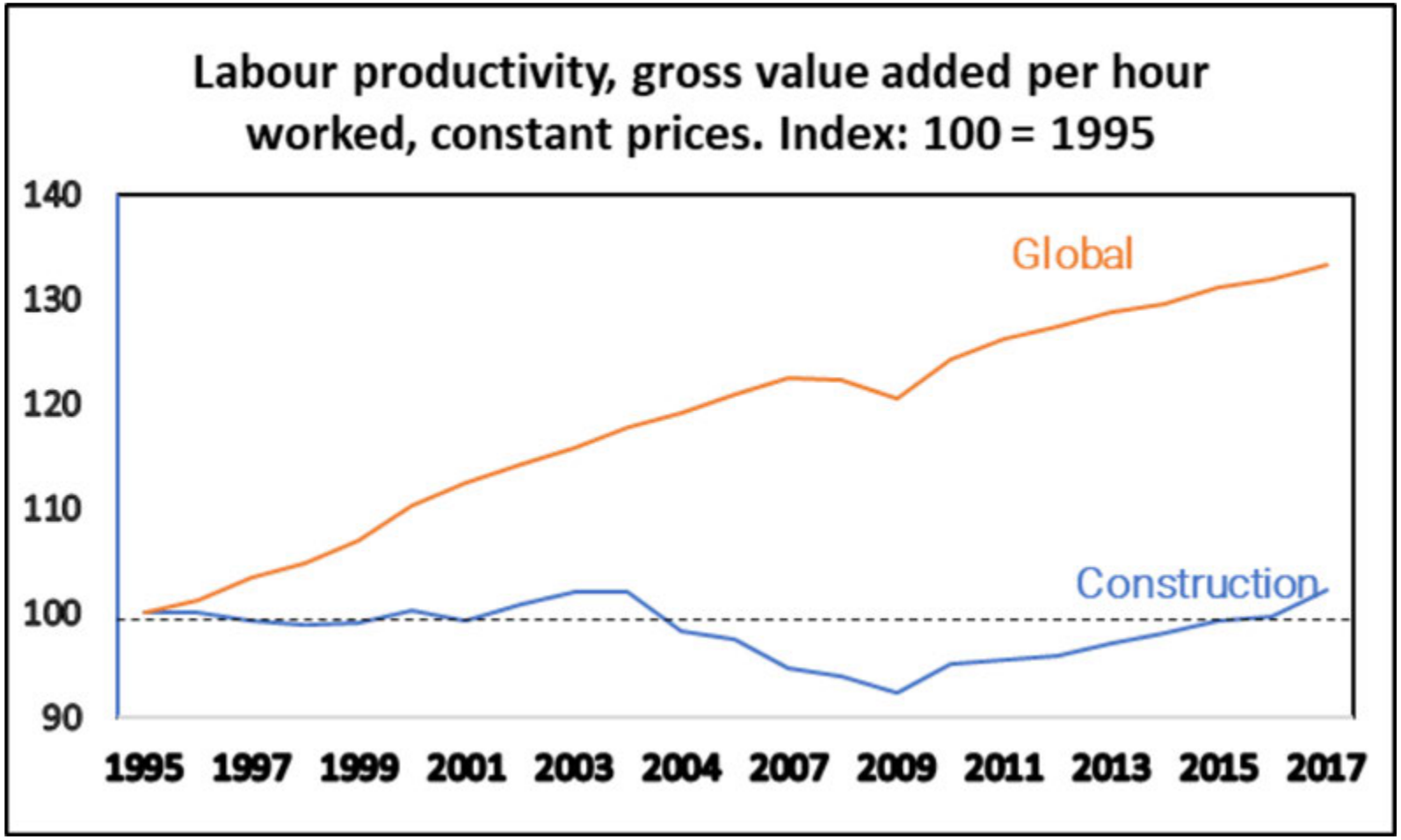
FACTORS THAT LED TO BIM

Compared to other productive sectors, the construction sector was affected by:

- Industrial process, but at the same time artisanal
- Very long time horizons
- A high degree of specialization e-fragmentation leading to asymmetries
- high disclosures causing a poor ability to risk assessment
- And a high degree of process inefficiencies
- Which prove to be a high waste of resources such as materials and time (cost increase)

BIM: From real to virtual

FACTORS THAT LED TO BIM



Source “bimplement project elaboration based on Organization for Economic Cooperation and Development (OECD) statistics”

BIM: From real to virtual

FACTORS THAT LED TO BIM

Shell and technology behave in the same way: they digitize and create a **model**

DEFINITION OF BIM *ISO 19650-1*

BIM is the use of a shared digital representation of a built asset to facilitate the design, construction and management processes and form a reliable basis for decisions.

BIM: the digital management of the construction process, that is: the industrialization of the sector

BIM (model)

It is a graphic and non-graphic representation of various physical and functional characteristics of building and civil works (**representation by objects**) including those relating to the expected **life cycle**. The models integrate design decision-making processes and, through **open standards**, allow **disciplinary interoperability** and make a profit in the project economy.

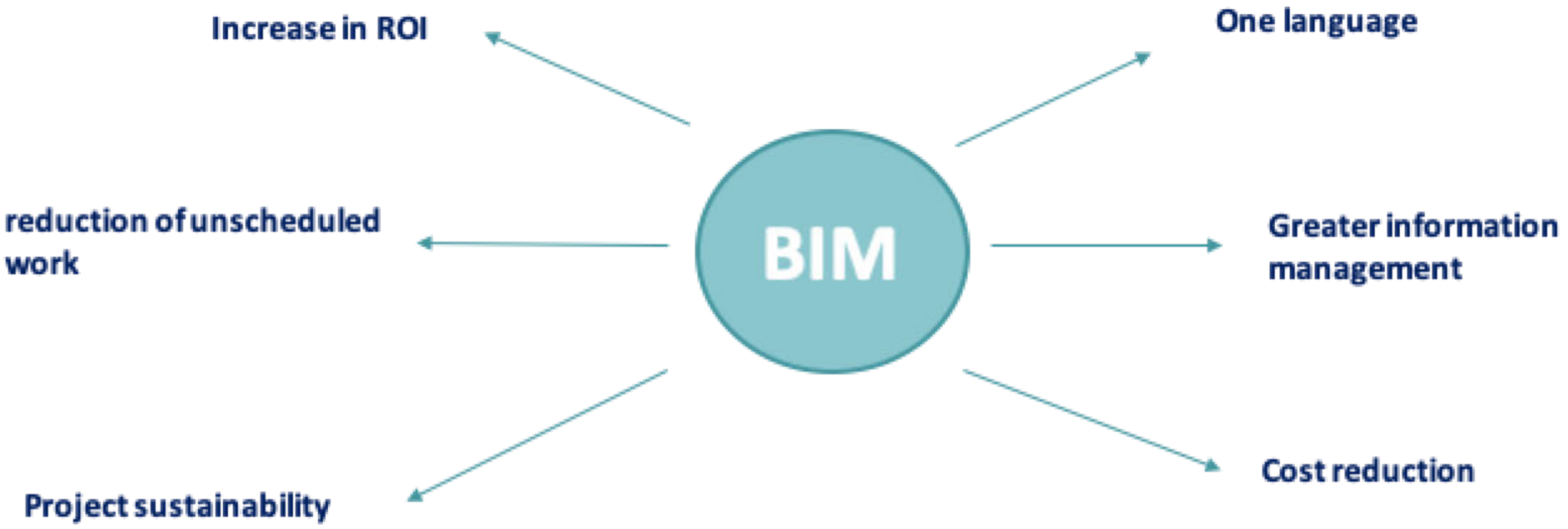
BIMM (modelling & management)

It is a global methodology of digital construction: the union between the building supply chain and the software industry based on **integrated environments in their multidisciplinary and synergistic ways**.
Not only a technological change, but also a methodological one that radically changes all the processes dedicated to the construction and management of buildings and civil works, **using data and information generated throughout** the useful life of the work right from the preliminary design and ensuring greater coordination and efficiency between all the operators involved, up to the management and maintenance of the asset.

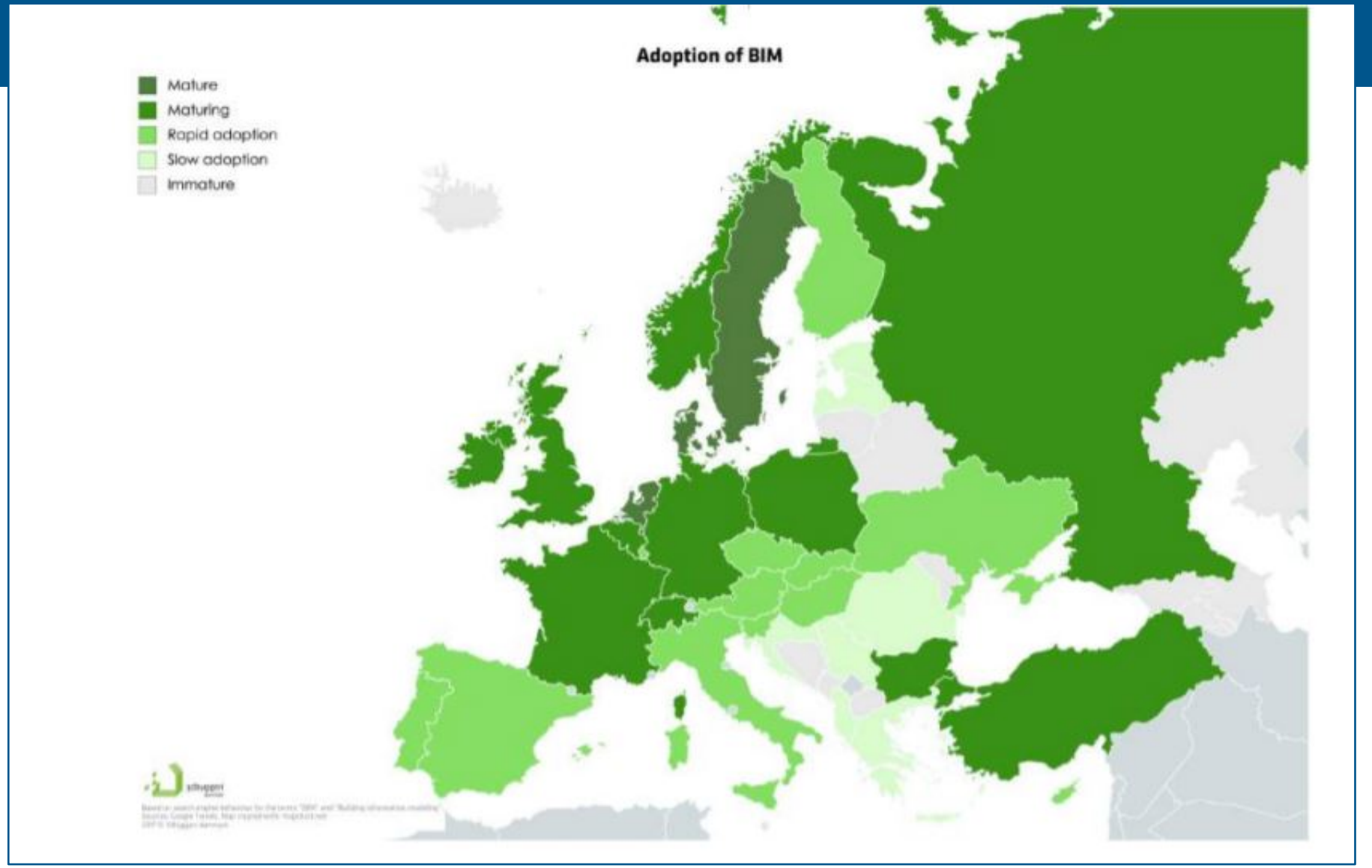
DEFINE THE FACTORS THAT LED TO BIM

BIM is an industrial process innovation that can support our sector in facing global challenges such as the waste of resources.

ADVANTAGES OF BIM



USE OF BIM IN EUROPE



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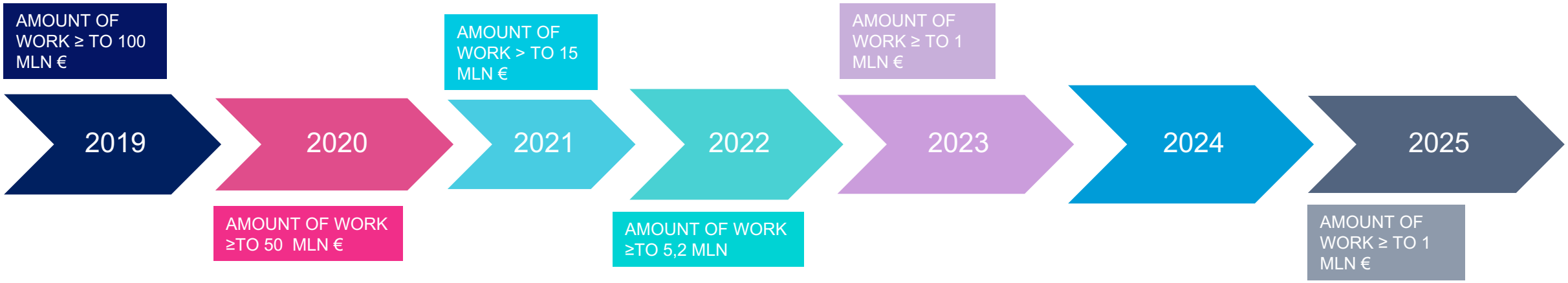
DEFINITION OF BIM: REGULATIONS

EXAMPLE: BIM REGULATION DEADLINES COMPEX WORK IN ITALY



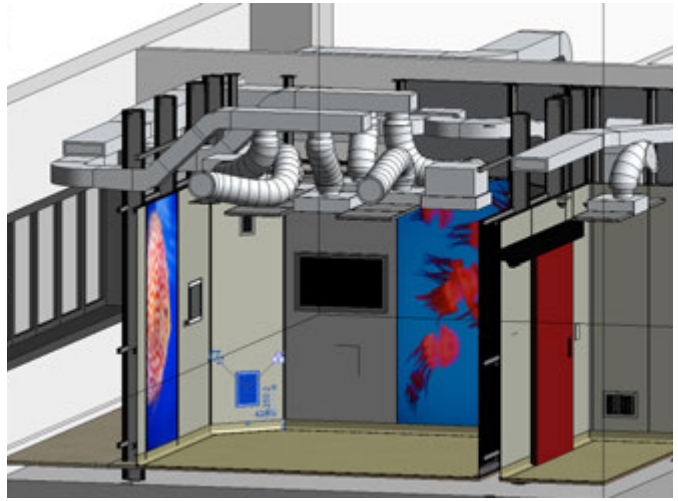
From the pencil to the model : process

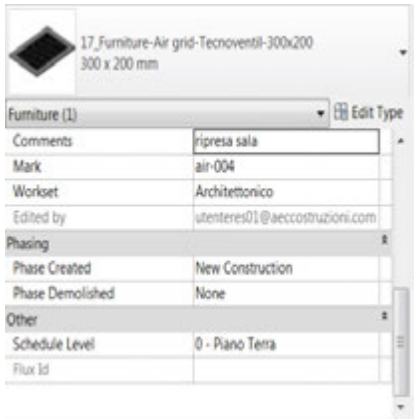
PENCIL	LINES	3D	OBJECT MODELING
			?

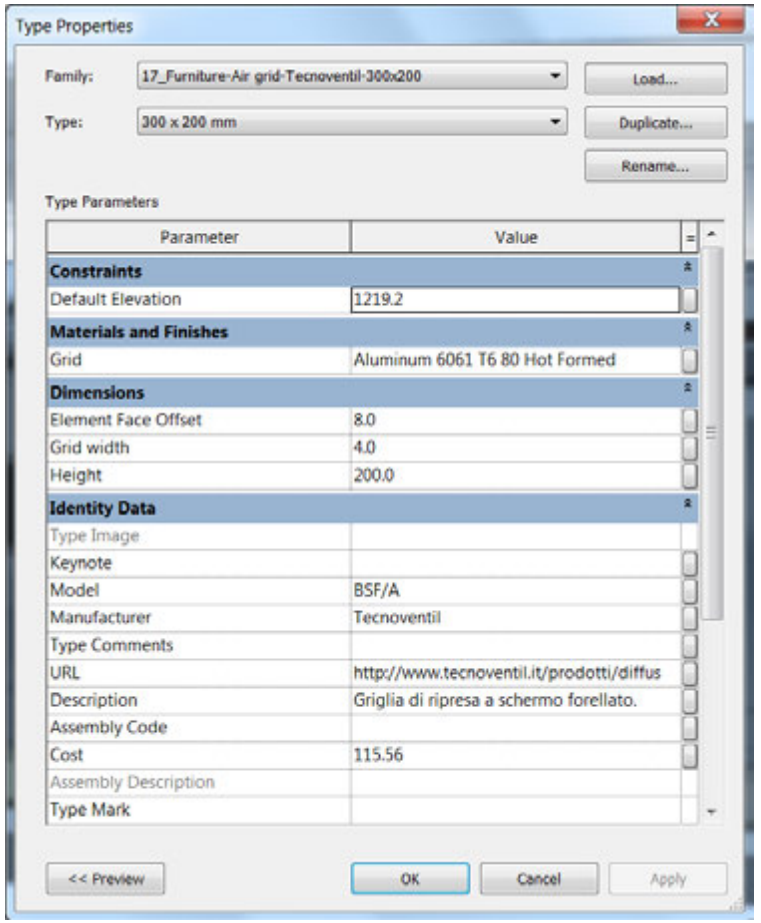
THE OBJECT MODELING

MODELING OF THE ELEMENTS

Leads to the definition of a 3D model, where each single part contains, in addition to geometric and spatial information, also other types of information that vary according to the applied discipline



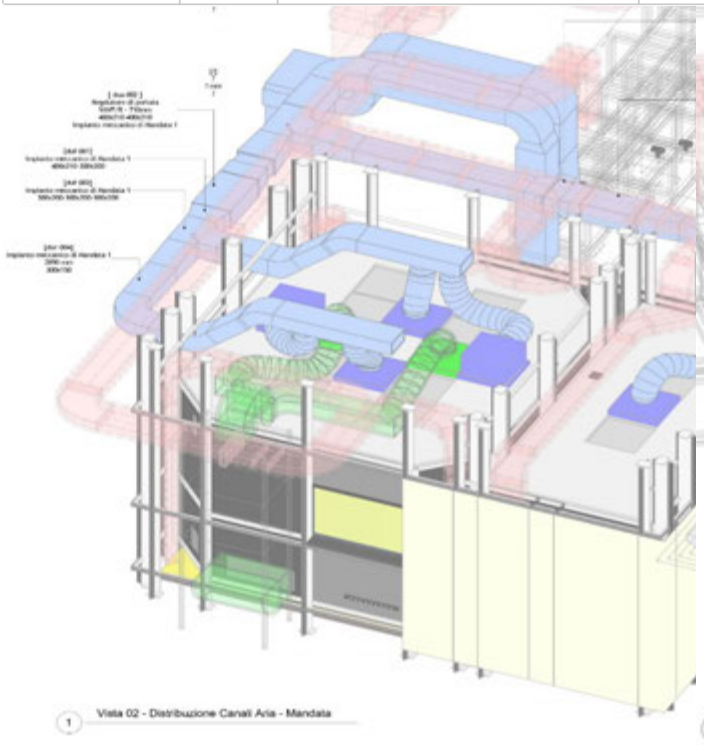


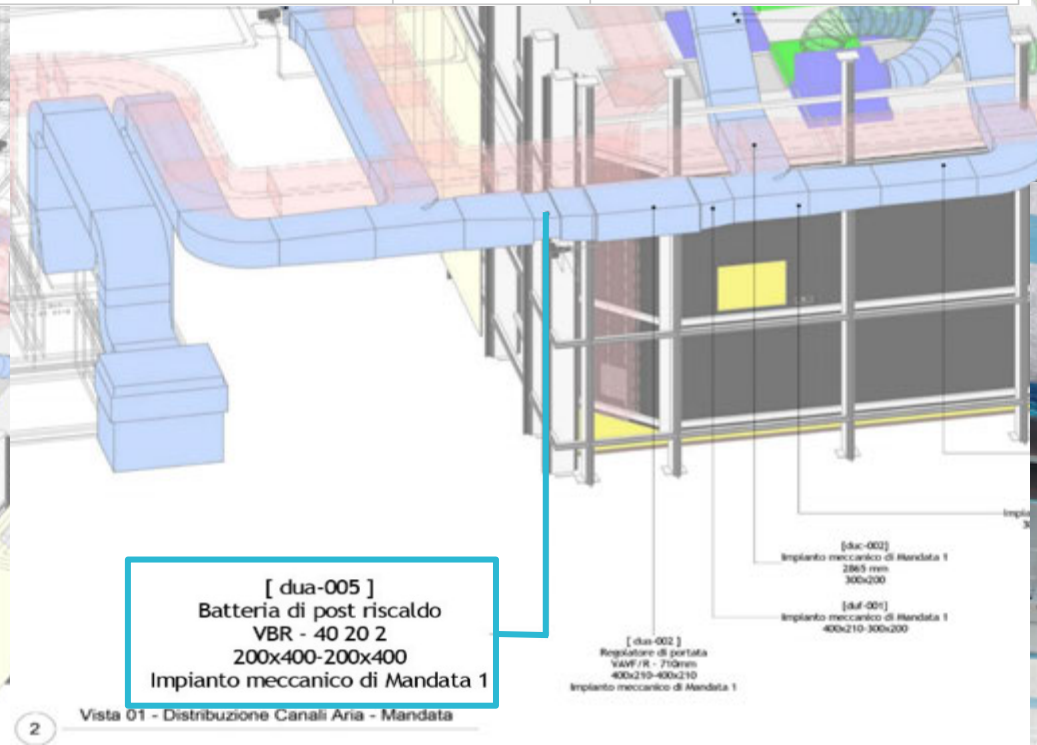


Maintenance example

AeC - Impianto Aria - Mandata - Macchine unità di regolazione

# Id	n.	Unità di regolazione	Prodotto	Modello	System Name
dua-010	1	840 x 510 x 760 mm	17_UTA - Sezione ripresa - espulsione	espulsione	Impianto meccanico di Mandata 2
dua-005	1	Batteria di post riscaldo	Systemair Water Air Heating	VBR - 40 20 2	Impianto meccanico di Mandata 1
dua-006	1	Batteria di post riscaldo	Systemair Water Air Heating	VBR - 40 20 2	Impianto meccanico di Mandata 1
dua-001	1	Regolatore di portata	Tecnoventil Insulated Control Damper	VAVF/R - 630mm	Impianto meccanico di Mandata 1
dua-002	1	Regolatore di portata	Tecnoventil Insulated Control Damper	VAVF/R - 710mm	Impianto meccanico di Mandata 1





Some advantages of using BIM

- *unique information model*

- *extraction of estimates and costs at each stage of the design*

- *interdisciplinary collaboration*

Some advantages of using BIM

Use of the models during the project phase:

- Coordination in the project phase
- Interdisciplinary
- Model checking
- Clash detection
- To solve the problems
- To carry out simulations

Use of the models under construction

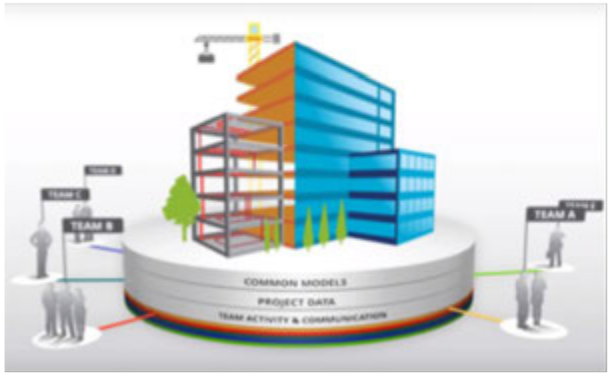
- To carry out assembly simulations
- Setting up of documents and ad hoc views for the various disciplines depending on the intended use
- Purpose boards

Use of the models under Maintenance

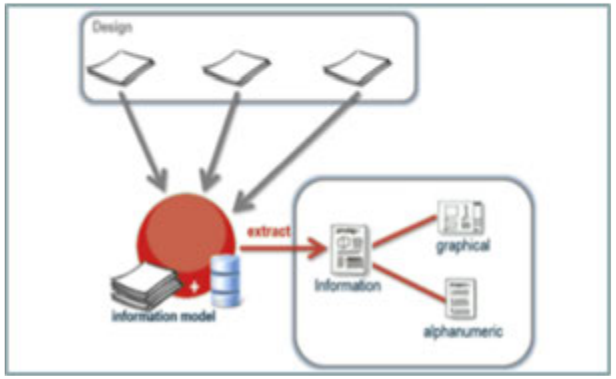
- Maintenance facilities
- Easy-to-find information on items to maintain
- Information on how to best organize maintenance

BIM: the fundamentals

Structured organization of the working group



Single source of information constantly updated
Sharing data



Secure access to project data

- Permission management and access regulation
- Track changes history
- Up-to-date data

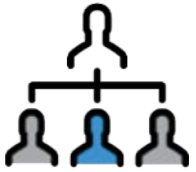
«One size DOESN'T fit all»

There is no universal method

It is essential to set clear **objectives** to define the method and process

Structured internal organization
(Report - BEP)

Software is just a tool, people **determine the process**



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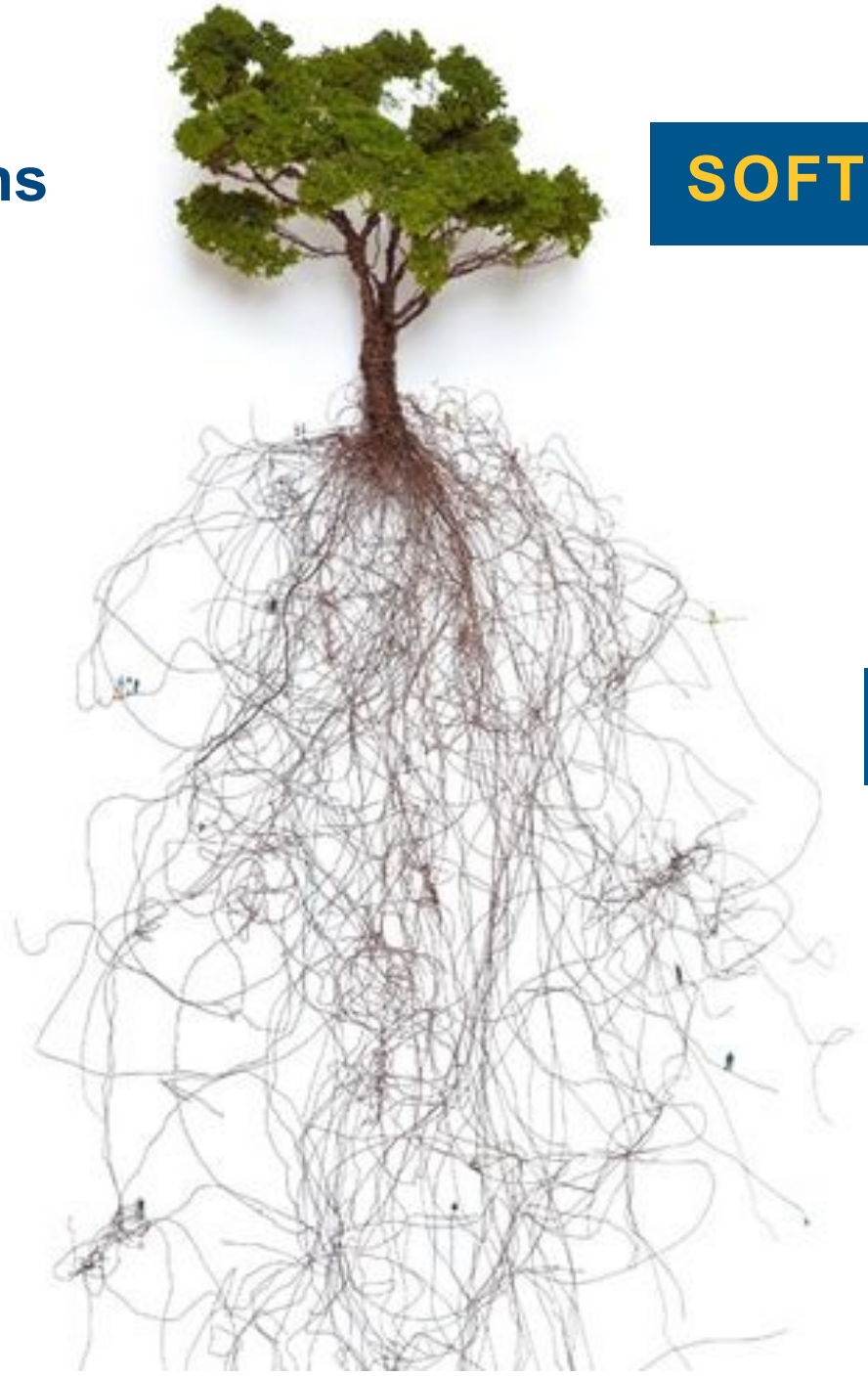
Computing Operations

SOFTWARE



Method

Process

Strategy

Communication

Culture

PEOPLE

THANK YOU
FOR YOUR ATTENTION

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