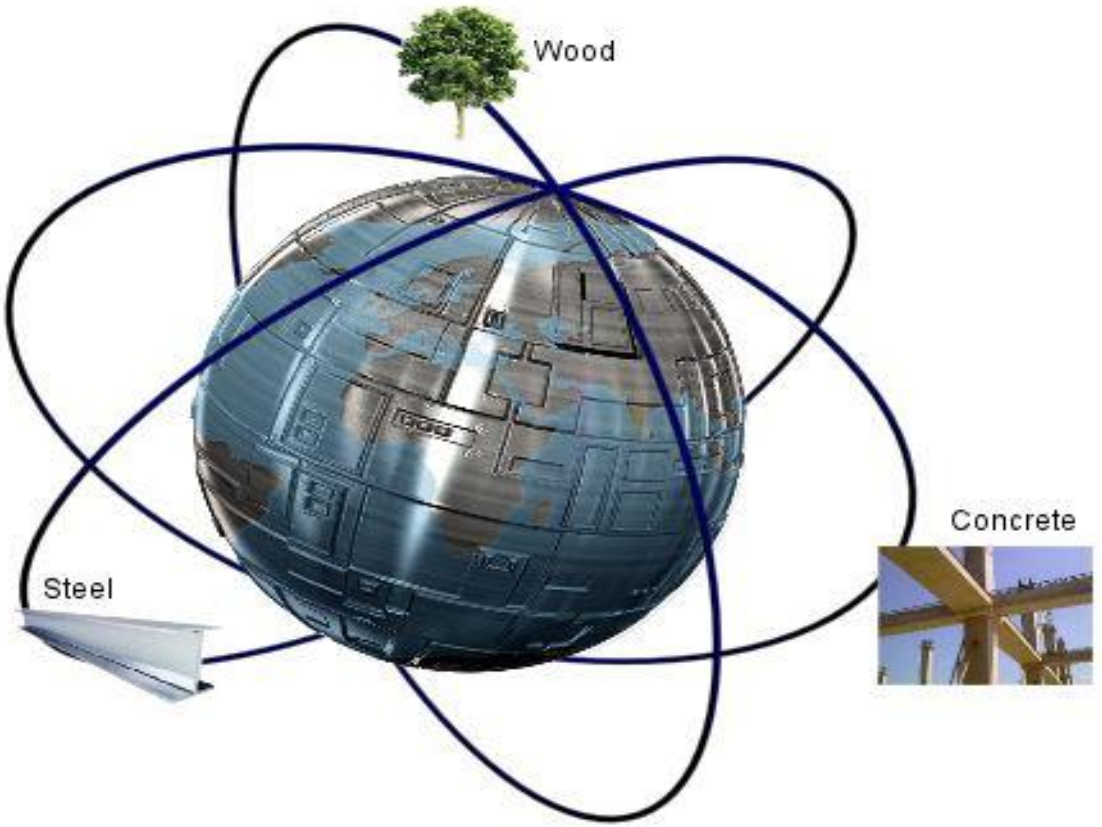
CONNEGO System

An eco-friendly LEGO-house based on a patented joining technology



❑The CONNEGO system, is a connection technology ideal for prefabricated constructions made of wood, steel or concrete.

❑ Patented in European and extended Worldwide .

❑Recognized by the European Commission as new technology and strategy for the development of prefabricated elements through the reuse and recycling of construction materials and structures.

❑CONNEGO employs a fast, simple and safe “LEGO” approach to design and build pre-fabricated buildings from structural (columns and beams) to non-structural (walls) elements.

❑FAST assembling process is extremely fast and it reduces considerably the installation time, allowing to create buildings in series. The construction time for a new building can be reduced from 6 to 3 months thanks to the Lego approach of the CONNEGO system.

❑SIMPLE SIMPLECONNEGO anchoring system takes place through a reclined paired surface and pulling pivots by using simple instruments.

❑SAFE -SAFE d steel anchor bolts close the entire structure and the risk of stress by vertical thrust from the bottom is strongly reduced.

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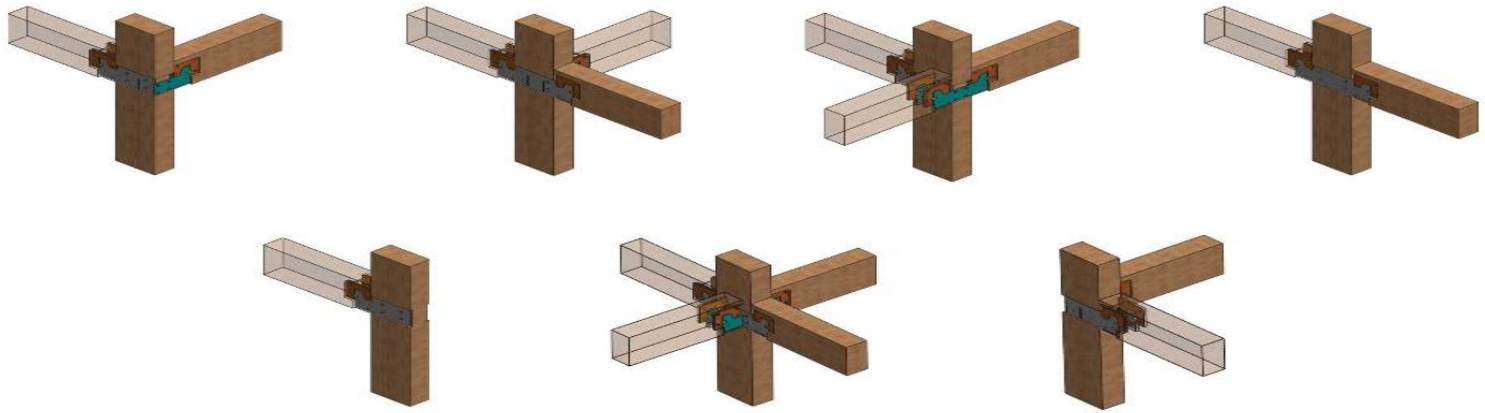
❑The mono or multi-storey (up to 30 floors) complex is designed as a three-dimensional frame, with fixed nodes at bases and nodes in full continuity at height.

❑Specifically, the geometry between brack-ets-beams and braket pillars allows complete adhesion between the wooden elements, with particular reference to the contact between the end face of the beam and the vertical surface of the column.

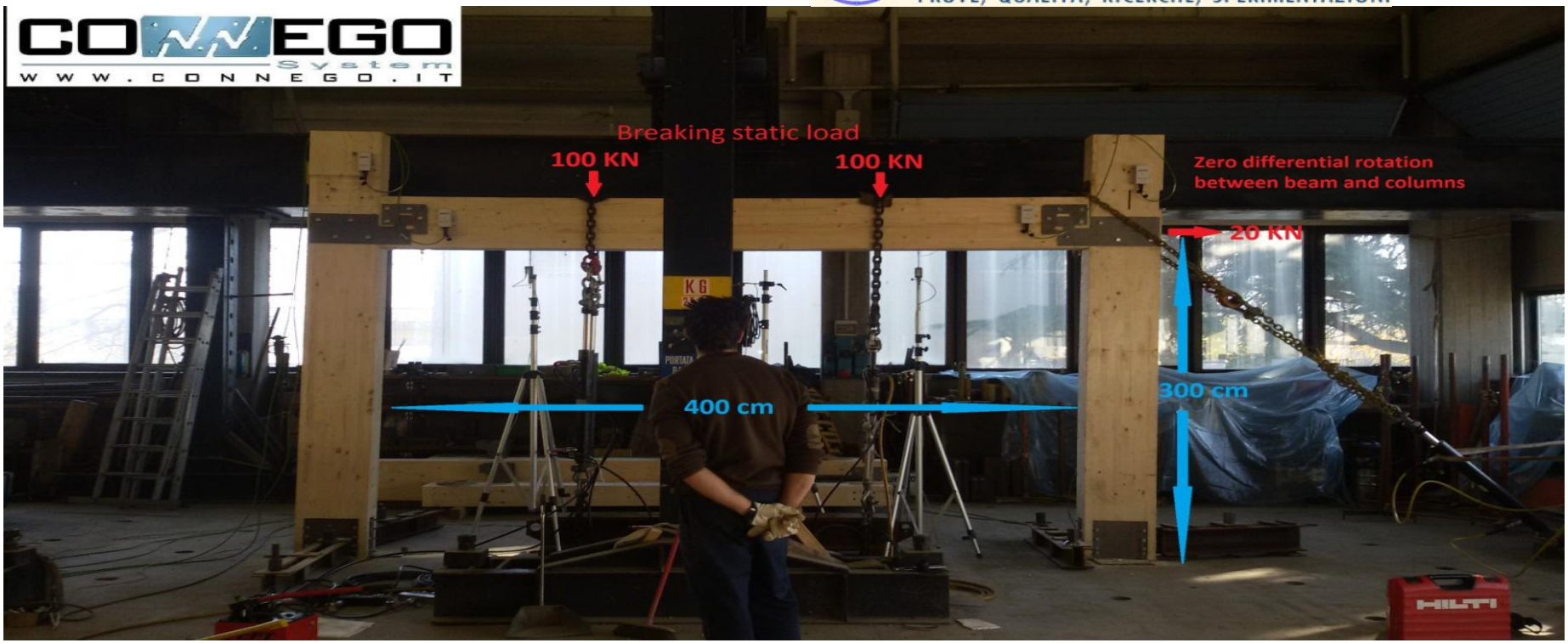
❑This condition, togheter with the balance of stress – any direction is interconnected with a pair brackets- allows you to create large structurals mesch without the aid of windbracing, including against seismic actions.



❑Thanks to the prefabrication technology and the installation ease, CONNEGO has the advantage of being removable, thus offering high sustainability and great quality in terms of energy and environment. It contributes to reduce the production of Construction and Demolition Waste (CDW) during the phases of the building life, and the consumption of energy.

❑The laboratory tests performed on real-scale frames have confirmed the static behavior of - two- and three-dimensional frame - which translates into efficiency of the seismic response of the structure. Certificated By PQRS

P.Q.R.S. s.r.l.
PROVE, QUALITÀ, RICERCHE, SPERIMENTAZIONI



❑The concepts and objectives to be developed within the project are perfectly aligned with the expectations and the overall purpose of the SME Instrument, and in particular with topic SMEInst-09-2016-2017: “Stimulating the innovation potential of SMEs for a low carbon and efficient energy system”.

❑As far as environmental impact is concerned, the use of a prefabricate approach based on CONNEGO allows to reduce CDW and contributes to reduce the use of concrete, whose production generates high CO2 emissions.

❑ The ease of assembly and disassembly increases the potential for reuse of prefabricated components.

❑Besides, the materials used, mainly based on renewable materials such as wood, are biodegradable and this will allow in the future a total waste disposal of them,with no polluting residuals.

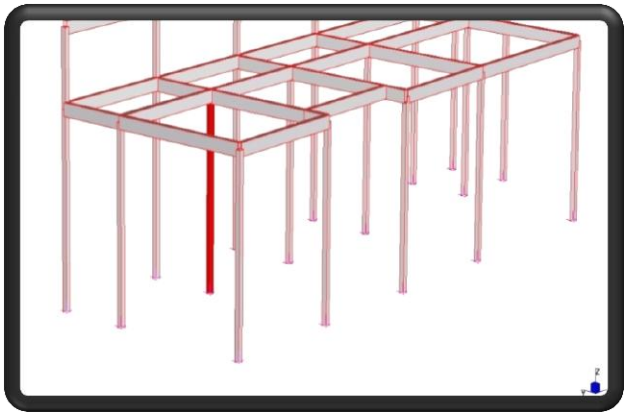
❑Further to the reduced impacts during the construction phase and disposal phase, CONNEGO will also allow to reach high energy performances during building use.

- Since CONNEGO is particularly suited to natural construction materials such as wood and fibres, it contributes to reducing the use of concrete and cementitious materials, whose production generates high CO2 emissions.
- In this regard, CONNEGO contributes to the achievement of the European policy target of a minimum 70% (w/w) of CDW prepared for reuse, as established in Waste Framework Directive 2008/98/EC; one of the objectives of the Directive is to provide a framework for moving towards a European recycling society with a high level of resource efficiency.
- This achievement has a significant importance if we consider that the annual waste production in EU is about 3 billion tonnes, out of which 90 million are hazardous waste. CDW accounts for approximately 25-30% (by mass) of all waste generated in the EU1.
- Moreover, buildings have the highest impacts on our environment: they are estimated to consume 30–50% of available raw materials, to account for 25-40% of final energy consumption and to generate about 40% of waste for landfills in OCDE countries.

The CONNEGO system represents a guarantee of environmental sustainability because offers high sustainability, great quality in terms of energy and environment, high level of comfort and a low level of consumption of resources.

Compared to other wooden prefabrication systems it allows to reduce the costs by 40% on the structure and 25% on the total of the finished manufactured

The assembly operations can be facilitated by the use of applications for smartphone or tablet which, through Q-Bar codes applied on the metal elements, highlighting each membratura the elaborate design of reference and make unique mounting of the same.



Similarly, in reference to the perimeter infill you can choose the application of prefabricated modules quick mounting. Assuming the use of wall panels in alveolar concrete - for example Ytong type - it is possible to estimate the installation of the entire perimeter of a house in n. 2 days with the use of n. 2 unskilled workers.

Axial Control

Angolo X = 269,171
Angolo Y = 359,703

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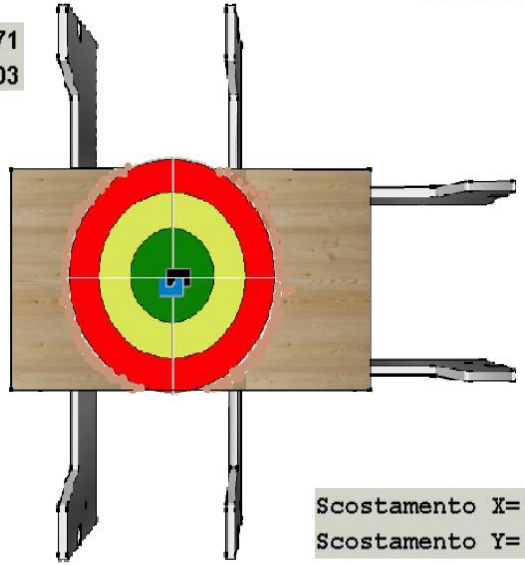
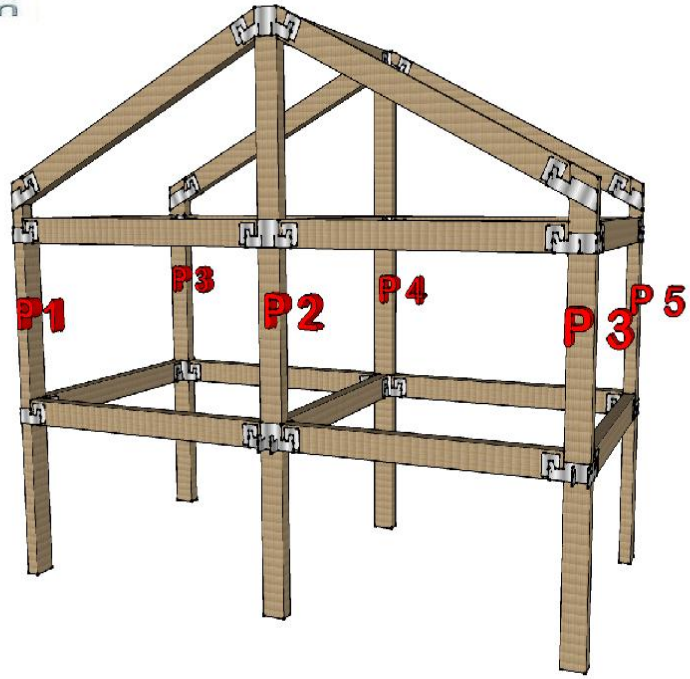
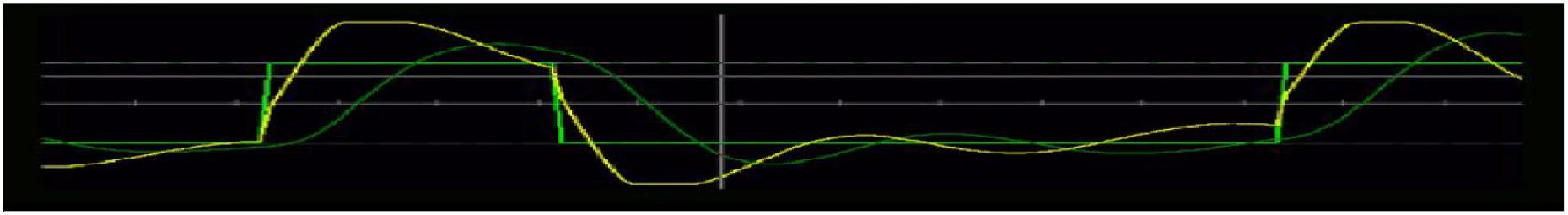


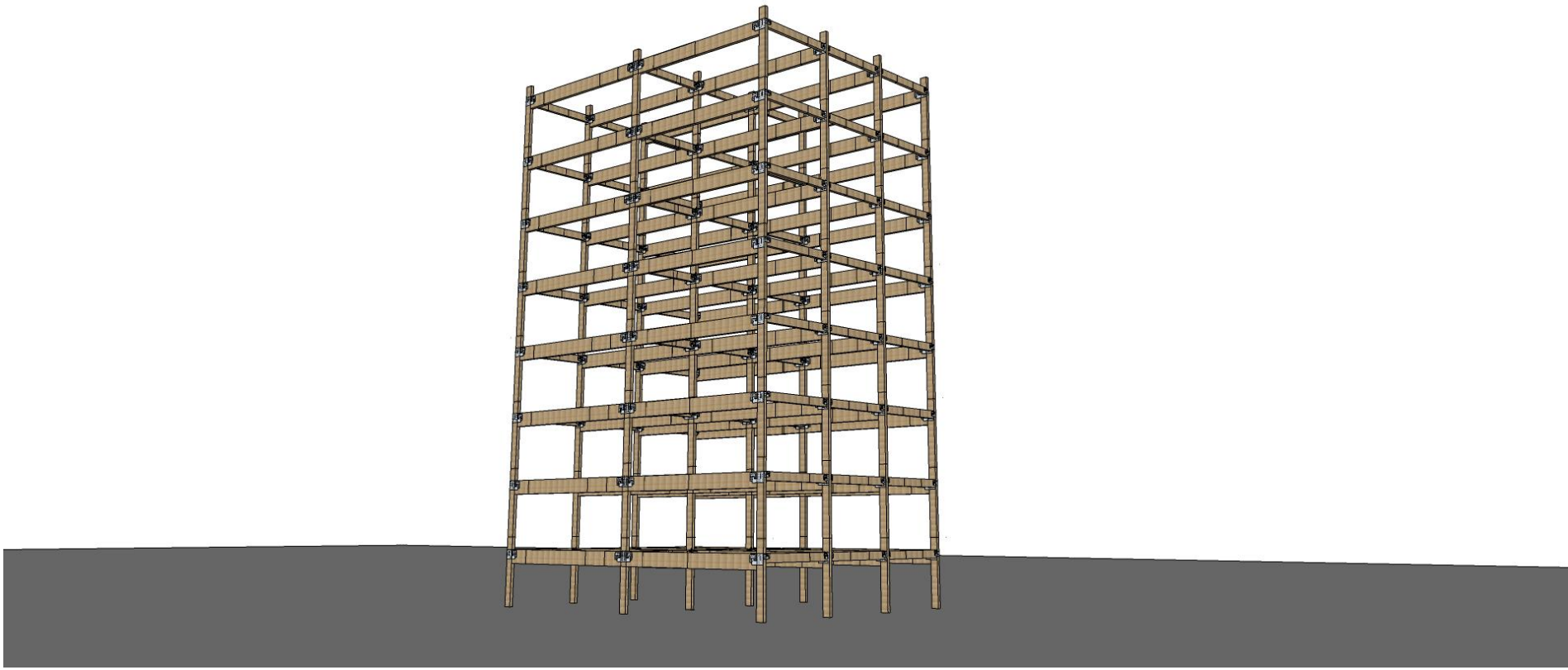
Scostamento X= 5,2 mm
Scostamento Y= 14,5 mm





THE CONSTRUCTION PHASES

MULTIPIANO



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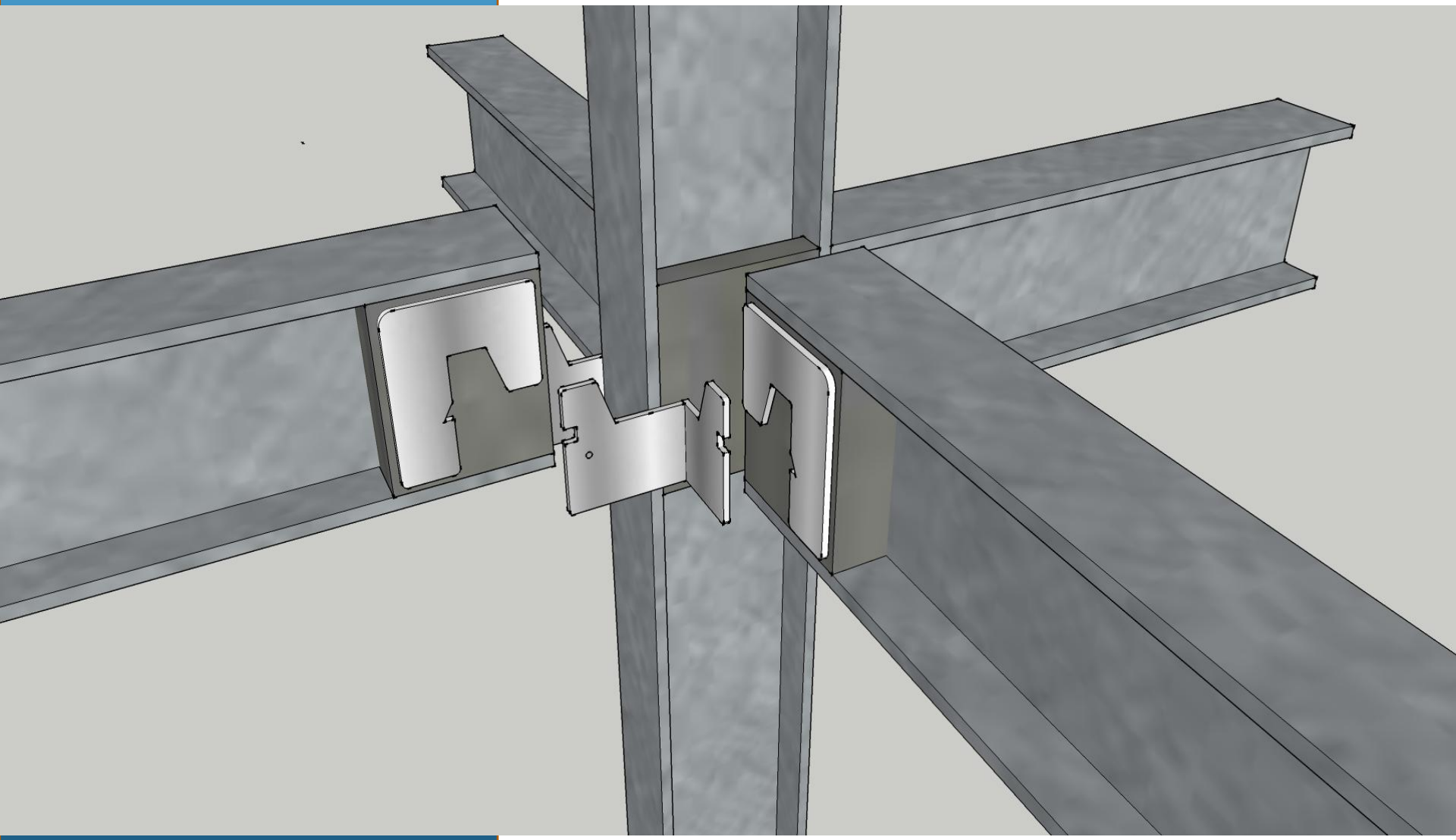
STEEL



➢In short:

❖The construction system can be used alternately and together wood-ferro-cement. –
❖You can realize civil buildings, industrial and commercial.
❖Simple construction and adaptability to every need civil, industrial also during the various stages of construction.
❖Constructive time reduced compared to conventional systems.
❖Reduction of costs compared to traditional systems by summing the advantages:
-1 time reduction; 2 reduction of materials and energy; 3 reduction of environmental pollution (yard waste and use of low environmental impact materials); 4 use of recyclable materials ; 5 reducing verification time of the buildings thanks to a control system ; 6 Possibility of use of low-skilled personnel thanks to the use of computerized guidance and control systems during assembly ; 7 Possibility of use of materials present in plenty in the area for the construction of prefabricated.
❖Structure with better resilience to seismic events.
❖ Ability to create very tall structures up to 30 floors.
❖ Ability to create lightweight structures and easily removed and replaced.
❖ Possibility to build prefabricated interior .
❖Application of the construction system also to other industrial fields (construction of furniture for civil housing or lightweight structures)

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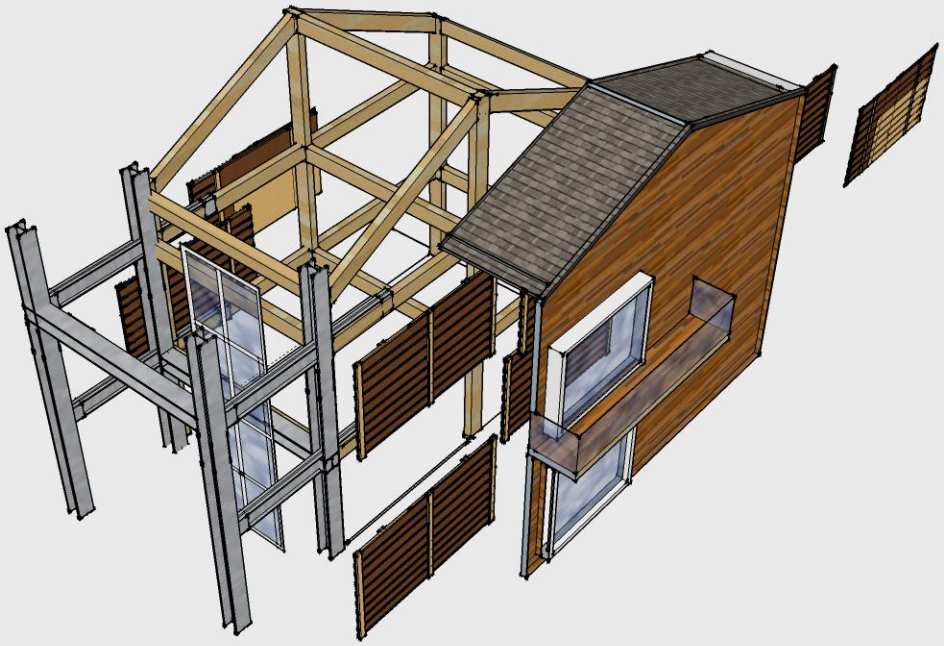

Thank you for your attention

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