



PRESENTATION of “LCA BIMtool” for BIMstone project

**Output 2 of BIMstone project.
MULTIMEDIA MATERIALS. NEW INTERACTIVE
BIM-LEARNING METHODS**



ROMANIA
GREEN
BUILDING
COUNCIL

COAMU



COLEGIO OFICIAL DE
ARQUITECTOS
REGIÓN DE MURCIA



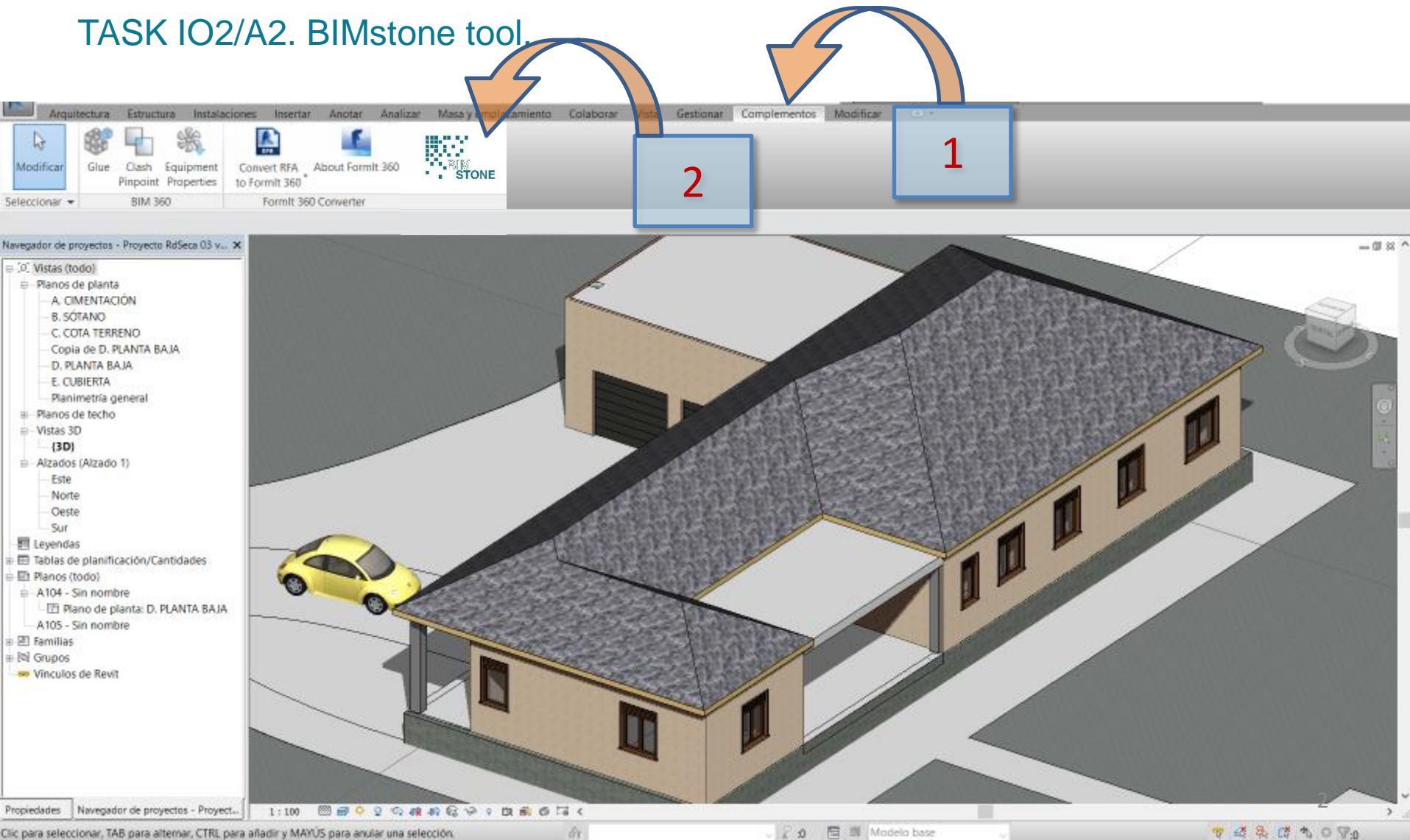
Centro Tecnológico
del mármol, piedra y materiales





O2. BIMstone Multimedia Materials. New Interactive BIM-Learning methods.

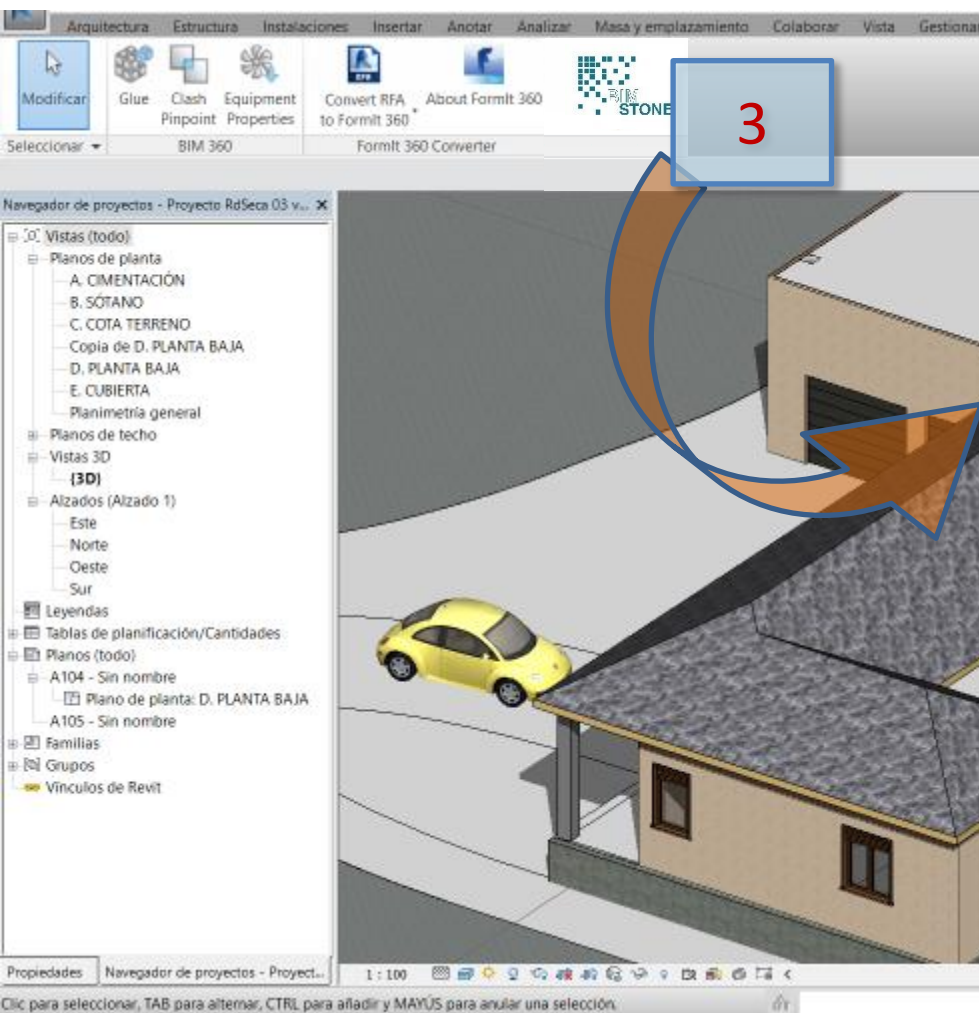
TASK IO2/A2. BIMstone tool.





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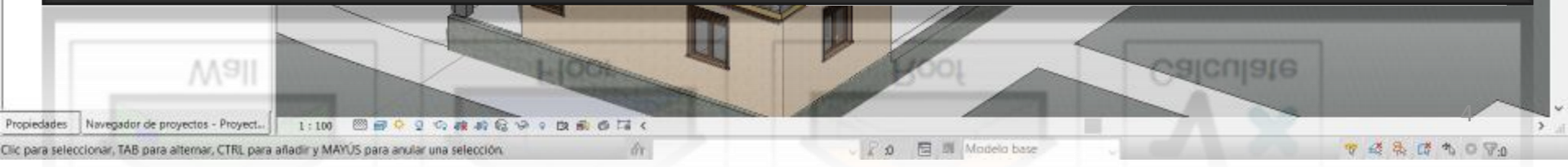
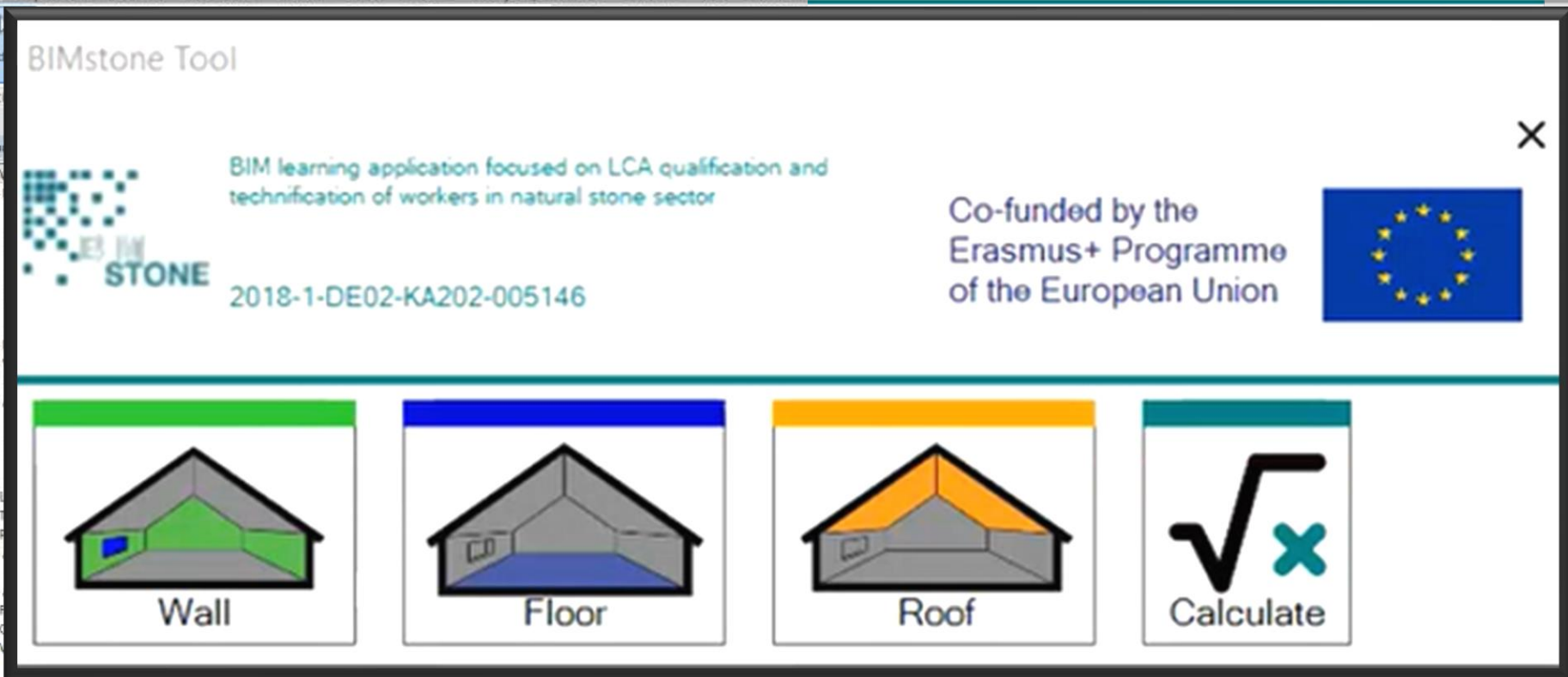
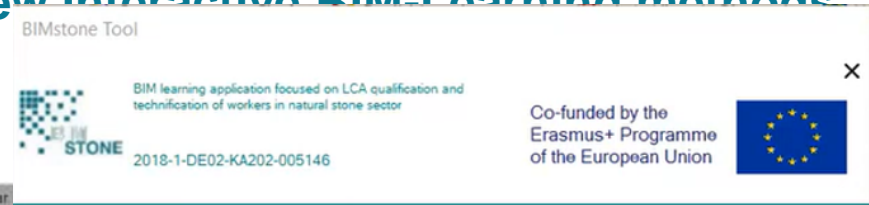
TASK IO2/A2. BIMstone tool.





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TASK IO2/A2. BIMstone tool.





O2. BIMstone Multimedia Materials. New Interactive BIM Learning methods

TASK IO2/A2. BIMstone tool.



The screenshot displays the BIMstone Tool interface. At the top, it identifies the application as a BIM learning tool for LCA qualification and worker technification in the natural stone sector, with the project ID 2018-1-DE02-KA202-005146. The interface includes a menu bar with options like 'Arquitectura', 'Estructura', and 'Instalaciones'. A toolbar contains icons for 'Modificar', 'Glue', 'Clash Pinpoint', 'Equipment Properties', 'Convert RFA to Formit 360', and 'About Formit 360'. The main workspace shows a 3D model of a building with a yellow car parked nearby. A left-hand navigation pane lists project views such as 'Planos de planta' and 'Planos de techo'. A pop-up window titled 'BIMstone Tool' is open, showing four main options: 'Wall', 'Floor', 'Roof', and 'Calculate'. A blue box with the number '4' is positioned over the 'Wall' option. At the bottom of the pop-up, there is a Creative Commons Attribution-ShareAlike 4.0 International License notice and a disclaimer from the European Commission.



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TASK IO2/A2. BIMstone tool.

The screenshot displays the BIMSTONE software interface. On the left, a project browser shows a tree view of the model's structure, including 'Planos de planta', 'Planos de techo', and 'Vistas 3D'. The main view shows a 3D perspective of a house with a yellow car parked nearby. A blue box with the number '5' highlights a specific facade element. A large orange arrow points from this box to a pop-up window titled 'BIMstone Tool'. This window contains a toolbar with icons for 'Wall', 'Floor', 'Roof', and 'Calculate'. Below the toolbar, three facade types are listed with their corresponding LCA descriptions:

- FC01-P-b + LCA Double skin façade.
- FC23-P-bgf + LCA Double facade with ventilated air cavity.
- FC25-B1 + LCA Single façade with ventilated air cavity and external thermal insulation.

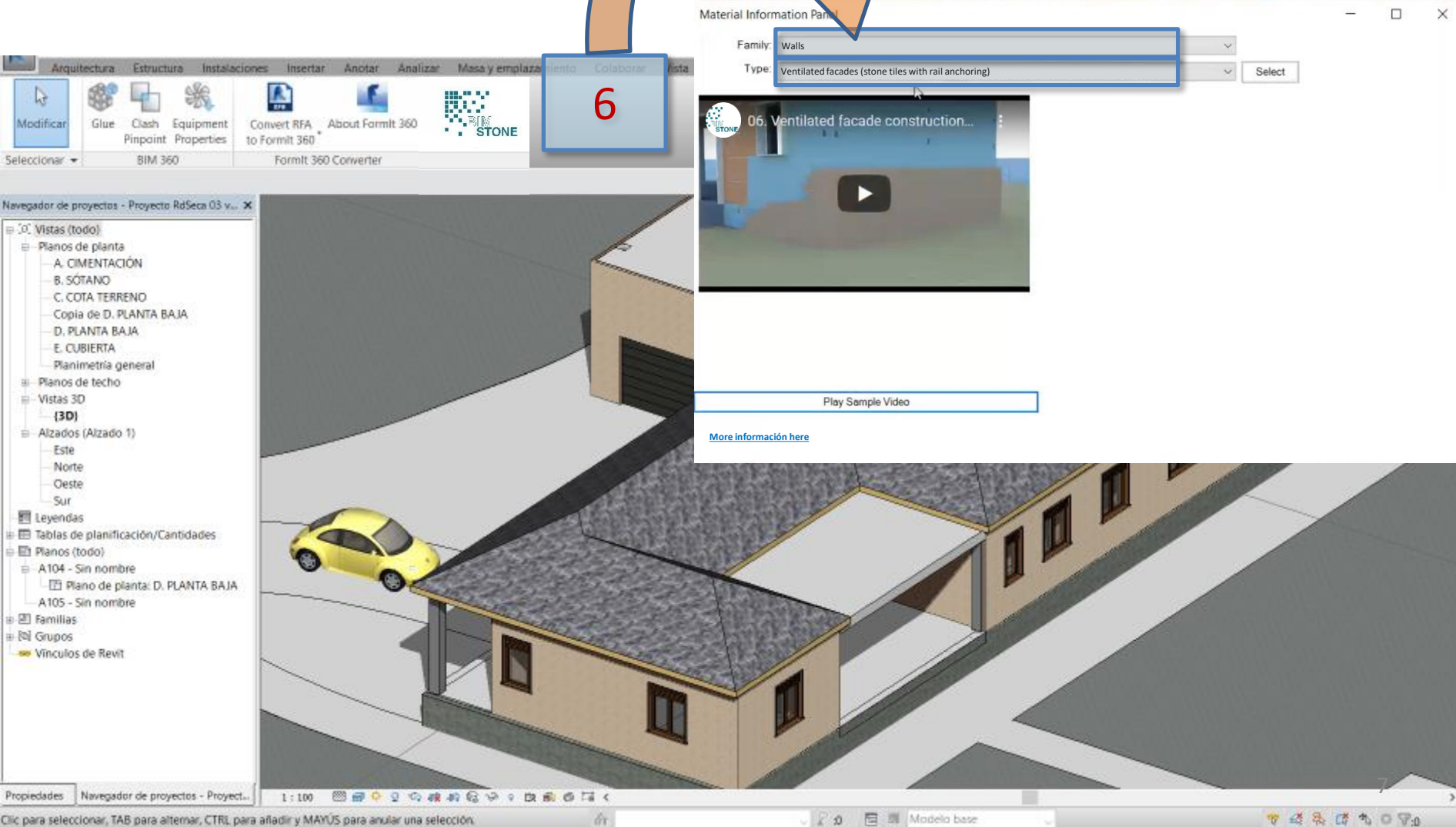
The software interface also shows a top menu bar with options like 'Arquitectura', 'Estructura', and 'Instalaciones', and a bottom status bar with the text 'Clic para seleccionar, TAB para alternar, CTRL para añadir y MAYÚS para anular una selección.'



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TASK IO2/A2. BIMstone tool.

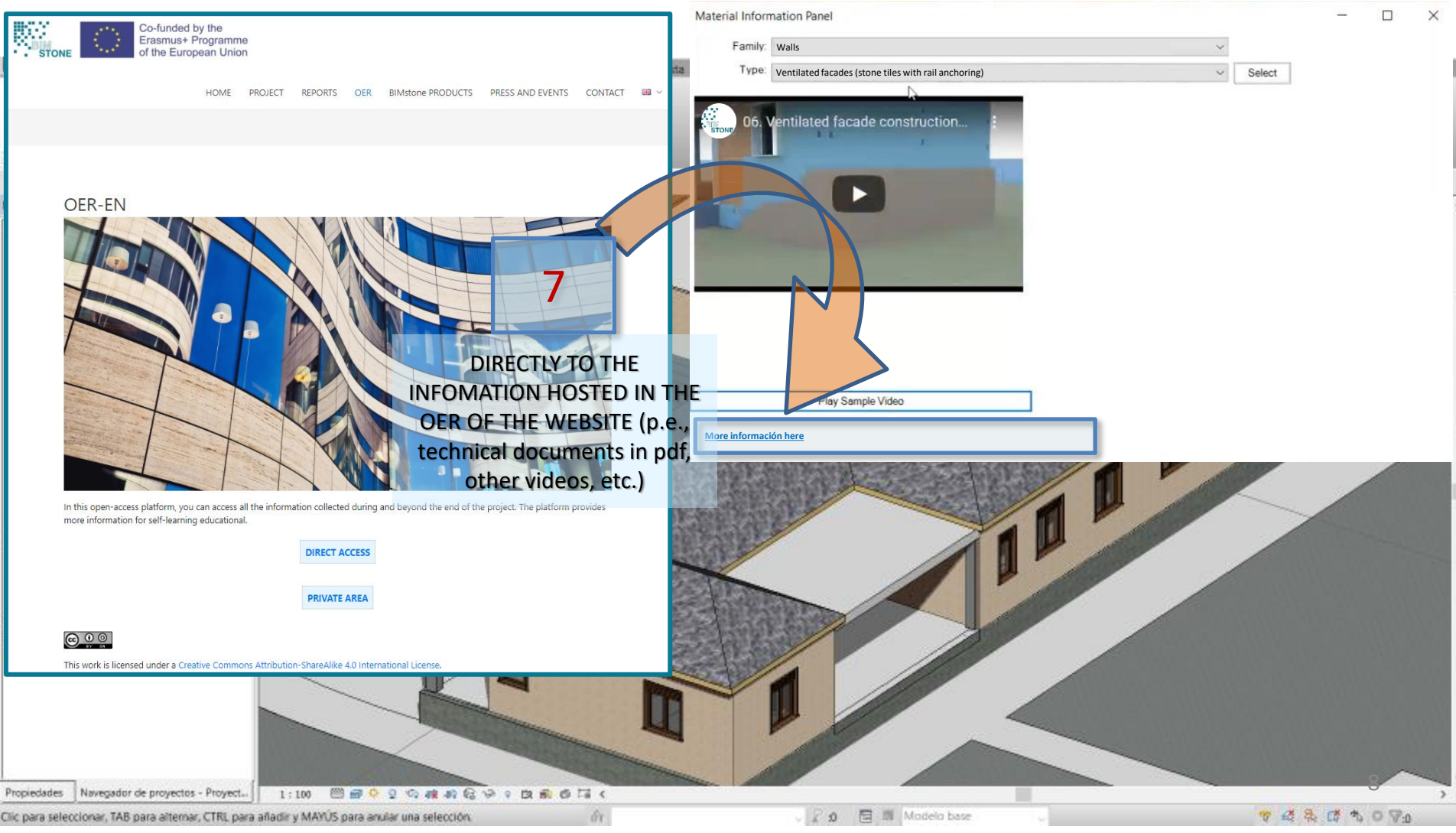
6



The screenshot displays the Revit software interface. On the left, the 'Navegador de proyectos' (Project Navigator) shows a tree view of the project structure, including 'Planos de planta' (Floor Plans) and 'Planos de techo' (Roof Plans). The main view shows a 3D perspective of a building model with a yellow car parked nearby. A 'Material Information Panel' is open on the right, showing the 'Family' as 'Walls' and the 'Type' as 'Ventilated facades (stone tiles with rail anchoring)'. Below the material information, there is a video player titled '06. Ventilated facade construction...' with a play button. A 'Play Sample Video' button is located below the video player. A 'More información here' link is also present. The Revit status bar at the bottom indicates 'Modelo base'.

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TASK IO2/A2. BIMstone tool.



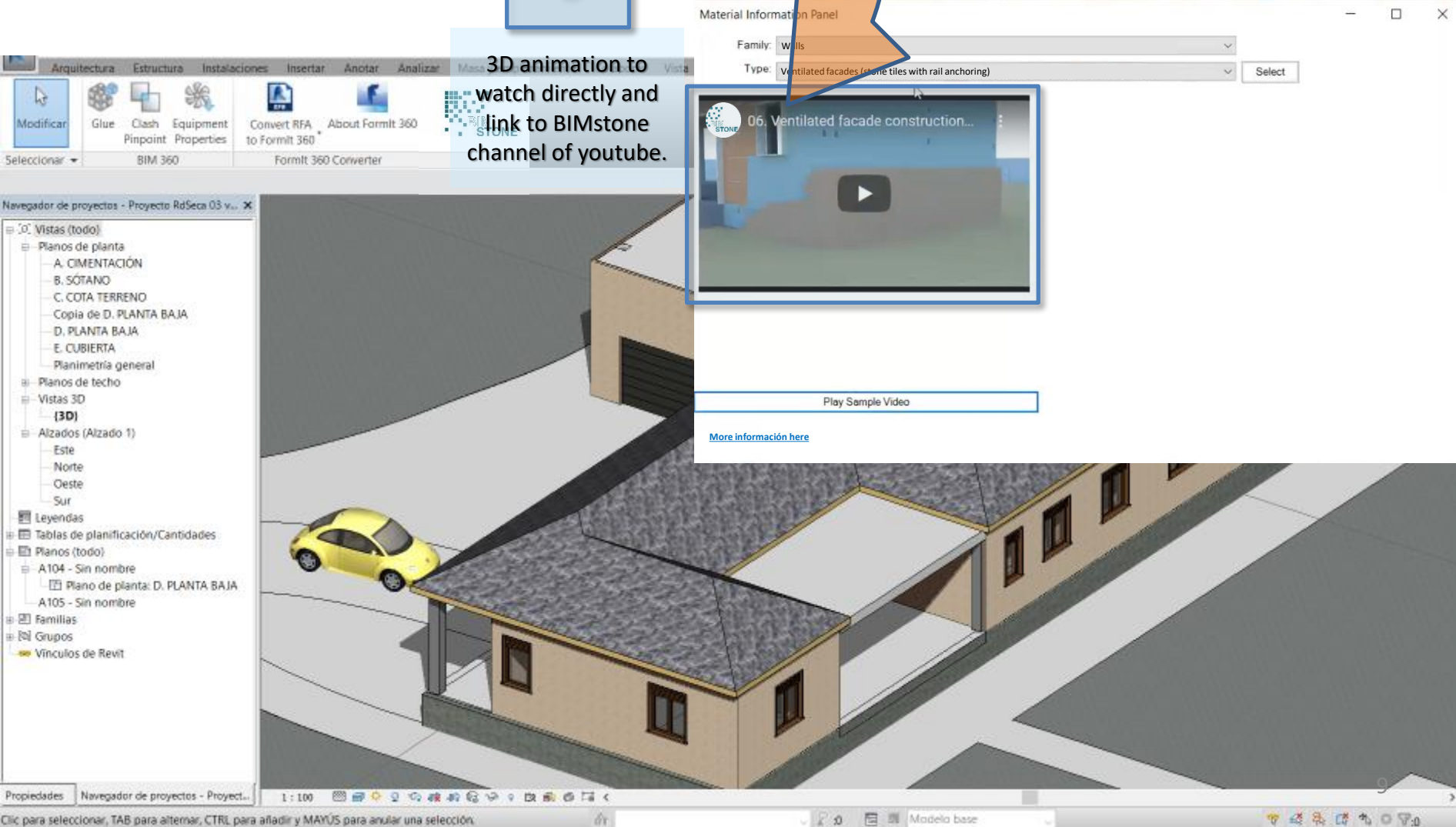
The image shows a workflow for accessing multimedia materials. On the left, a screenshot of the BIMstone website (OER-EN) features a large image of a modern building facade. A red number '7' is overlaid on a section of the image. A blue box highlights the text: "DIRECTLY TO THE INFORMATION HOSTED IN THE OER OF THE WEBSITE (p.e., technical documents in pdf, other videos, etc.)". Below this text are buttons for "DIRECT ACCESS" and "PRIVATE AREA". A blue arrow points from the highlighted text to a "Material Information Panel" window on the right. This panel shows a video player with the title "06. Ventilated facade construction..." and a "Play Sample Video" button. Below the video player is a "More información here" link. The background of the software interface shows a 3D architectural model of a building.



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TASK IO2/A2. BIMstone tool.8

3D animation to
watch directly and
link to BIMstone
channel of youtube.

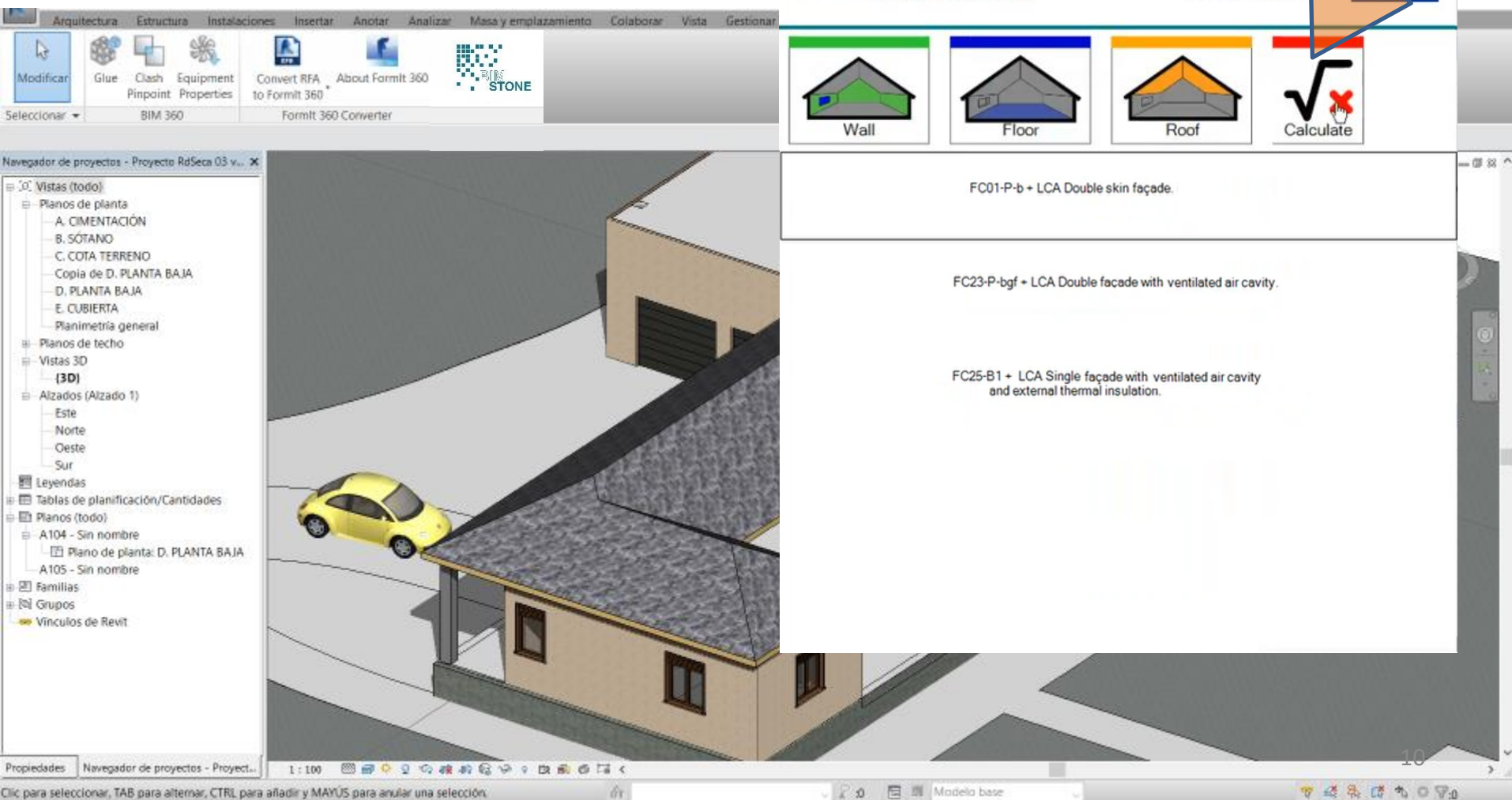


The screenshot displays a BIM software interface with a 3D model of a building. A yellow car is positioned on the ground next to the building. The interface includes a top menu bar with options like 'Arquitectura', 'Estructura', and 'Instalaciones'. A 'Material Information Panel' is open, showing 'Family: Walls' and 'Type: Ventilated facades (stone tiles with rail anchoring)'. A video player is embedded in the interface, showing a 3D animation of a ventilated facade construction. The video player has a play button and a 'Play Sample Video' button below it. A 'More información here' link is also visible. The left sidebar shows a project navigation tree with various views and plans. The bottom status bar indicates '1 : 100' and 'Modelo base'.



O2. BIMstone Multimedia Materials. New Interactive BIM Learning methods

TASK IO2/A2. BIMstone tool.



The screenshot displays the BIMstone Tool interface. On the left, a 3D model of a building is shown with a yellow car parked nearby. The interface includes a top menu bar with options like 'Arquitectura', 'Estructura', and 'Instalaciones'. Below the menu is a toolbar with icons for 'Modificar', 'Glue', 'Clash Pinpoint', 'Equipment Properties', 'Convert RFA to Formit 360', and 'About Formit 360'. A 'Navegador de proyectos' (Project Navigator) panel on the left shows a tree view of project elements, including 'Planos de planta', 'Planos de techo', and 'Vistas 3D'. A pop-up window titled 'BIMstone Tool' is overlaid on the right side, featuring a large number '9' in a blue box. The pop-up window contains the following information:

- BIMstone Tool**
- BIM learning application focused on LCA qualification and technification of workers in natural stone sector
- Co-funded by the Erasmus+ Programme of the European Union
- 2018-1-DE02-KA202-005146

The pop-up window also features a navigation bar with four icons: 'Wall', 'Floor', 'Roof', and 'Calculate'. Below this bar, three LCA facade types are listed:

- FC01-P-b + LCA Double skin façade.
- FC23-P-bgf + LCA Double facade with ventilated air cavity.
- FC25-B1 + LCA Single façade with ventilated air cavity and external thermal insulation.

The bottom of the screenshot shows the Windows taskbar with the system clock at 10:10 and the active window titled 'Modelo base'.



O2. BIMstone Multimedia Materials. New Interactive BIM Learning methods

TASK IO2/A2. BIMstone tool.

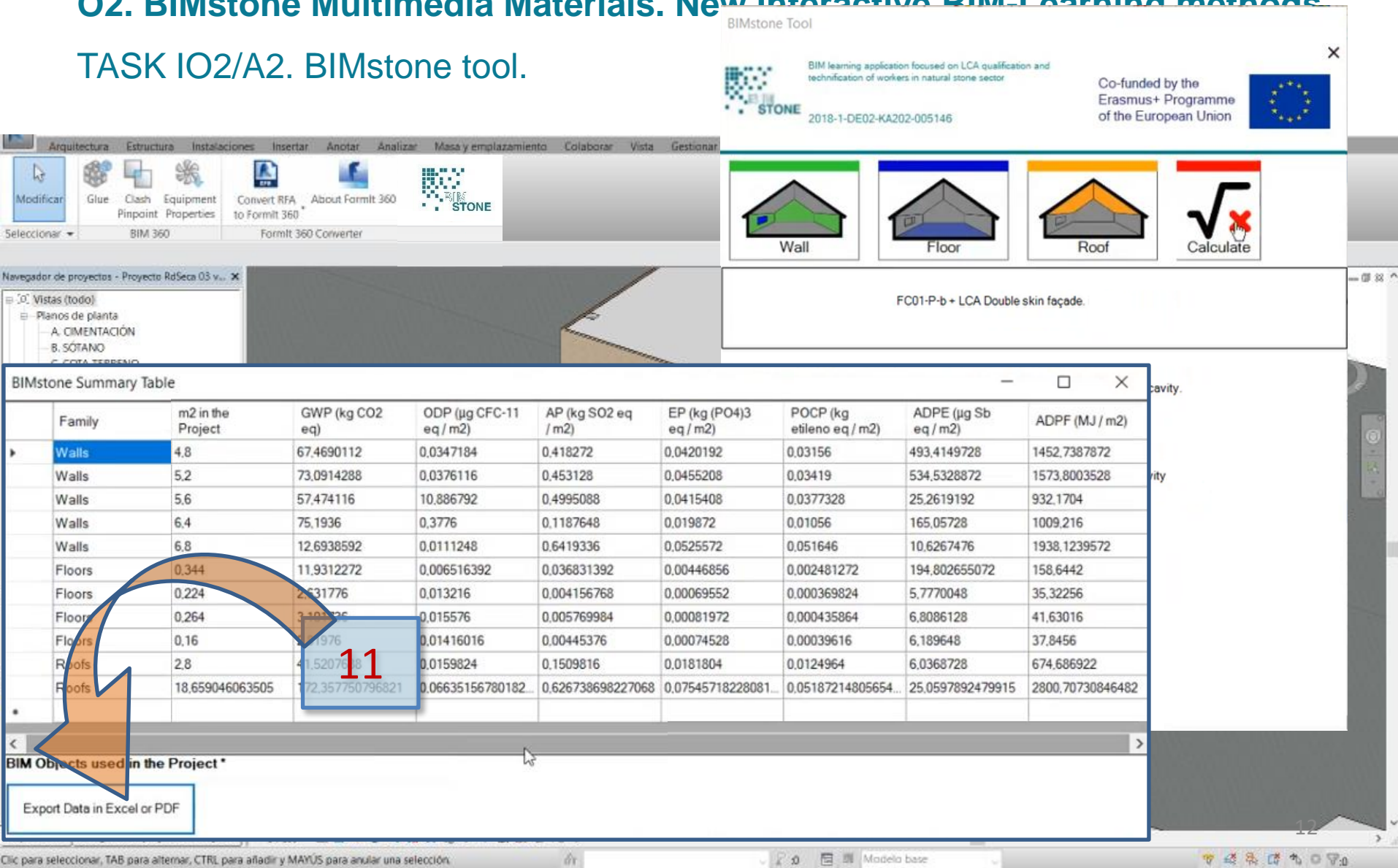
The screenshot displays the BIMstone tool interface. A large blue arrow with the number '10' points to the 'Calculate' button in the top right panel. The interface includes a top menu bar with options like 'Arquitectura', 'Estructura', and 'Instalaciones'. Below the menu is a toolbar with icons for 'Modificar', 'Glue', 'Push', 'Equipment Properties', 'Convert RFA to Formit 360', and 'About Formit 360'. The main area shows a 3D model of a building facade with a double skin. A 'BIMstone Summary Table' window is open, displaying environmental data for various building components. Below the table is a section for 'BIM Objects used in the Project' with an 'Export Data in Excel or PDF' button.

Family	m2 in the Project	GWP (kg CO2 eq)	ODP (µg CFC-11 eq / m2)	AP (kg SO2 eq / m2)	EP (kg (PO4)3 eq / m2)	POCP (kg etileno eq / m2)	ADPE (µg Sb eq / m2)	ADPF (MJ / m2)
Walls	4.8	67.4690112	0.0347184	0.418272	0.0420192	0.03156	493.4149728	1452.7387872
Walls	5.2	73.0914288	0.0376116	0.453128	0.0455208	0.03419	534.5328872	1573.8003528
Walls	5.6	57.474116	10.886792	0.4995088	0.0415408	0.0377328	25.2619192	932.1704
Walls	6.4	75.1936	0.3776	0.1187648	0.019872	0.01056	165.05728	1009.216
Walls	6.8	12.6938592	0.0111248	0.6419336	0.0525572	0.051646	10.6267476	1938.1239572
Floors	0.344	11.9312272	0.006516392	0.036831392	0.00446856	0.002481272	194.802655072	158.6442
Floors	0.224	2.631776	0.013216	0.004156768	0.00069552	0.000369824	5.7770048	35.32256
Floors	0.264	3.101736	0.015576	0.005769984	0.00081972	0.000435864	6.8086128	41.63016
Floors	0.16	2.81976	0.01416016	0.00445376	0.00074528	0.00039616	6.189648	37.8456
Roofs	2.8	41.5207688	0.0159824	0.1509816	0.0181804	0.0124964	6.0368728	674.686922
Roofs	18.659046063505	172.357750796821	0.06635156780182...	0.626738698227068	0.07545718228081...	0.05187214805654...	25.0597892479915	2800.70730846482



O2. BIMstone Multimedia Materials. New Interactive BIM Learning methods

TASK IO2/A2. BIMstone tool.



The screenshot displays the BIMstone tool interface. At the top, there is a menu bar with options like 'Arquitectura', 'Estructura', 'Instalaciones', etc. Below the menu is a toolbar with icons for 'Modificar', 'Glue', 'Clash Pinpoint', 'Equipment Properties', 'Convert RFA to Formit 360', and 'About Formit 360'. A 'BIMSTONE' logo is also present in the toolbar.

A 'BIMstone Tool' window is open, showing the BIM learning application logo and the project ID '2018-1-DE02-KA202-005146'. It features four icons: 'Wall', 'Floor', 'Roof', and 'Calculate'. Below these icons, the text 'FC01-P-b + LCA Double skin façade.' is displayed.

The 'BIMstone Summary Table' window is open, showing a table with the following data:

Family	m2 in the Project	GWP (kg CO2 eq)	ODP (µg CFC-11 eq / m2)	AP (kg SO2 eq / m2)	EP (kg (PO4)3 eq / m2)	POCP (kg etileno eq / m2)	ADPE (µg Sb eq / m2)	ADPF (MJ / m2)
Walls	4.8	67.4690112	0.0347184	0.418272	0.0420192	0.03156	493.4149728	1452.7387872
Walls	5.2	73.0914288	0.0376116	0.453128	0.0455208	0.03419	534.5328872	1573.8003528
Walls	5.6	57.474116	10.886792	0.4995088	0.0415408	0.0377328	25.2619192	932.1704
Walls	6.4	75.1936	0.3776	0.1187648	0.019872	0.01056	165.05728	1009.216
Walls	6.8	12.6938592	0.0111248	0.6419336	0.0525572	0.051646	10.6267476	1938.1239572
Floors	0.344	11.9312272	0.006516392	0.036831392	0.00446856	0.002481272	194.802655072	158.6442
Floors	0.224	2.631776	0.013216	0.004156768	0.00069552	0.000369824	5.7770048	35.32256
Floors	0.264	3.103776	0.015576	0.005769984	0.00081972	0.000435864	6.8086128	41.63016
Floors	0.16	1.976	0.01416016	0.00445376	0.00074528	0.00039616	6.189648	37.8456
Roofs	2.8	41.5207136	0.0159824	0.1509816	0.0181804	0.0124964	6.0368728	674.686922
Roofs	18.659046063505	172.357750796821	0.06635156780182...	0.626738698227068	0.07545718228081...	0.05187214805654...	25.0597892479915	2800.70730846482

An orange arrow points from the 'Walls' row in the table to the 'Calculate' button in the BIMstone Tool window. A blue box with the number '11' is overlaid on the table.

At the bottom of the interface, there is a section titled 'BIM Objects used in the Project *' with a button labeled 'Export Data in Excel or PDF'.