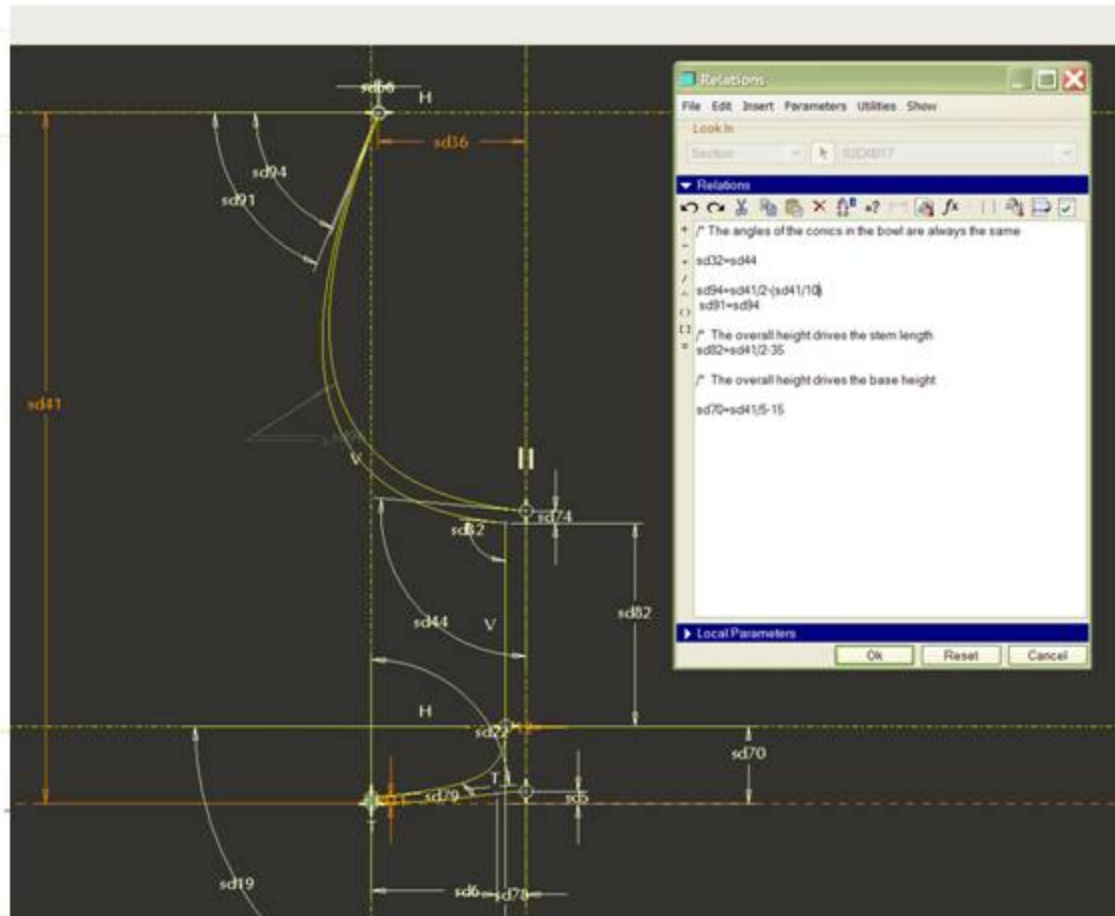
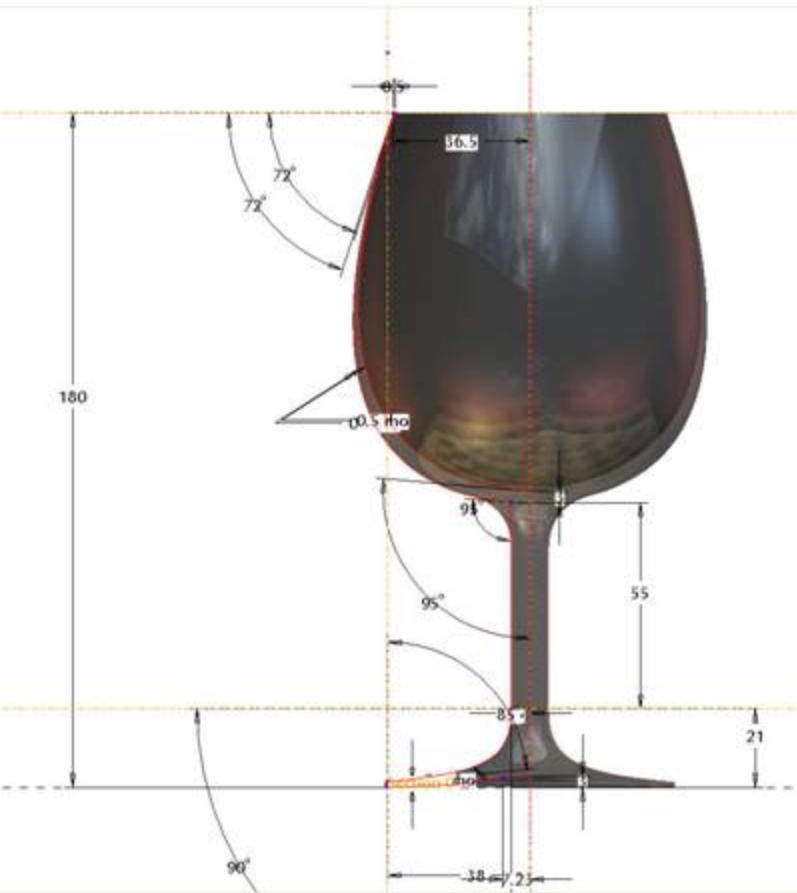


COMMON USES OF PARAMETRICS

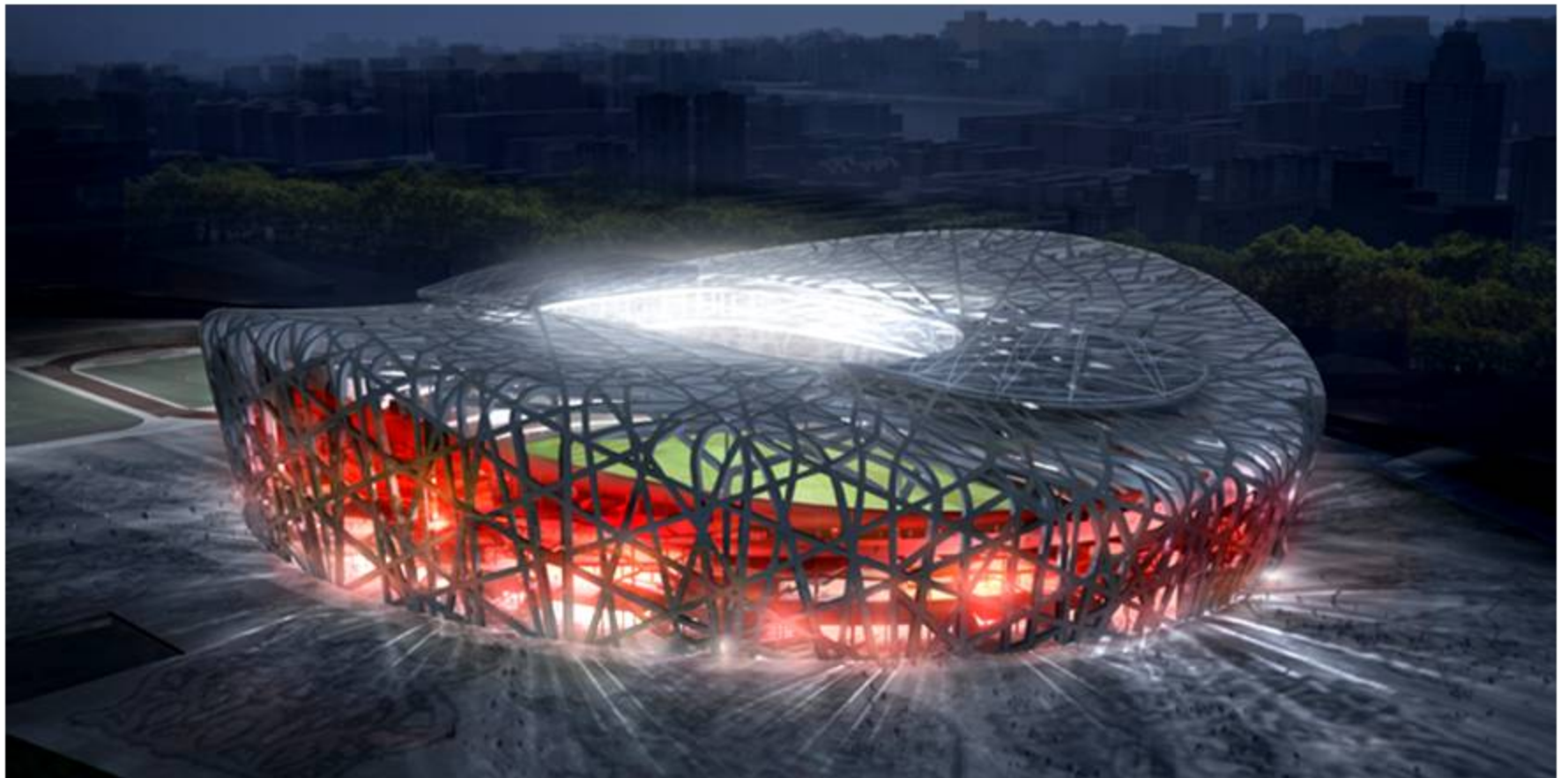
Relationships, not absolutes

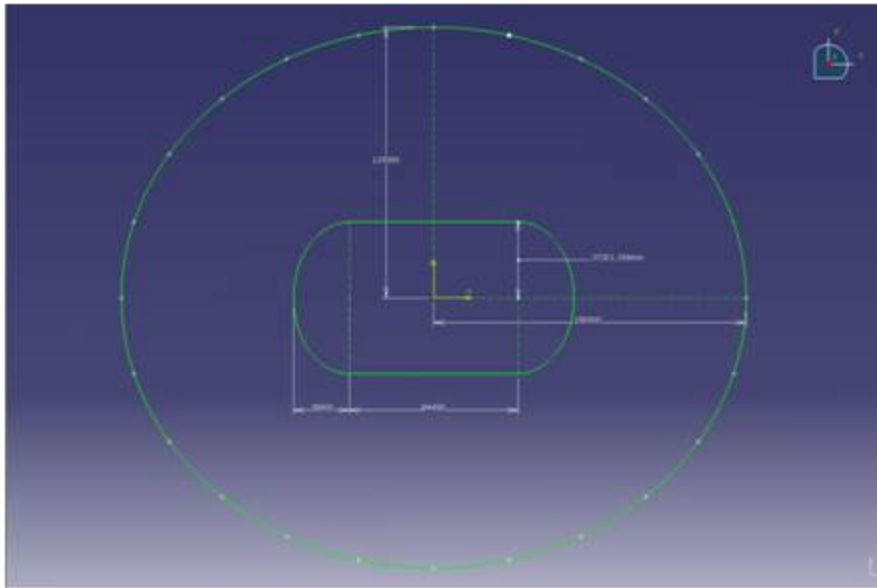


...so they can initiate a cascade of actions from a single variable

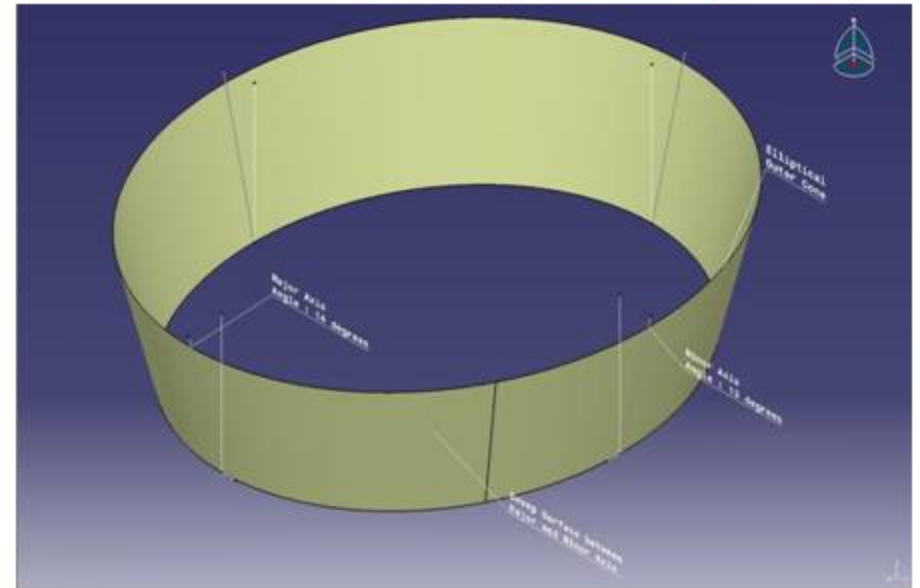


...or they can be governed by hierarchical relationships

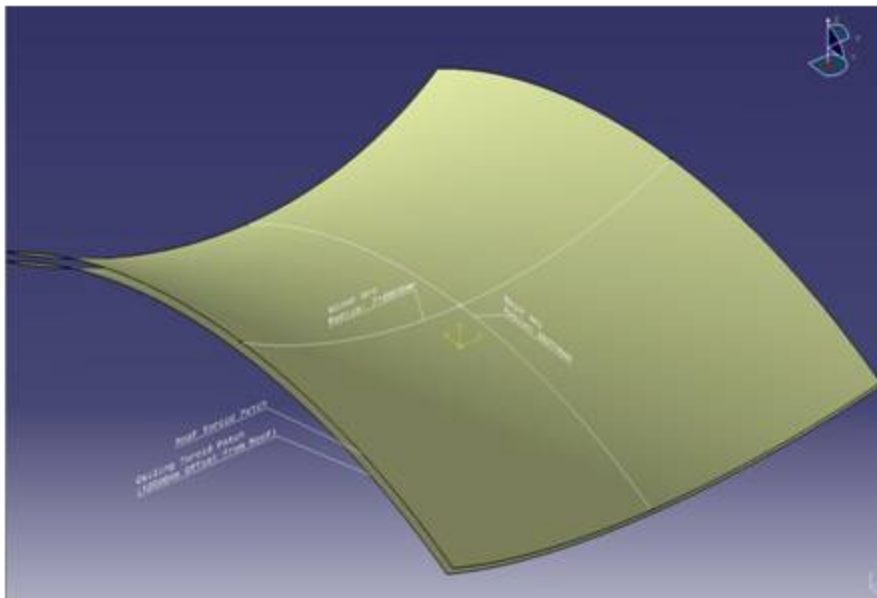




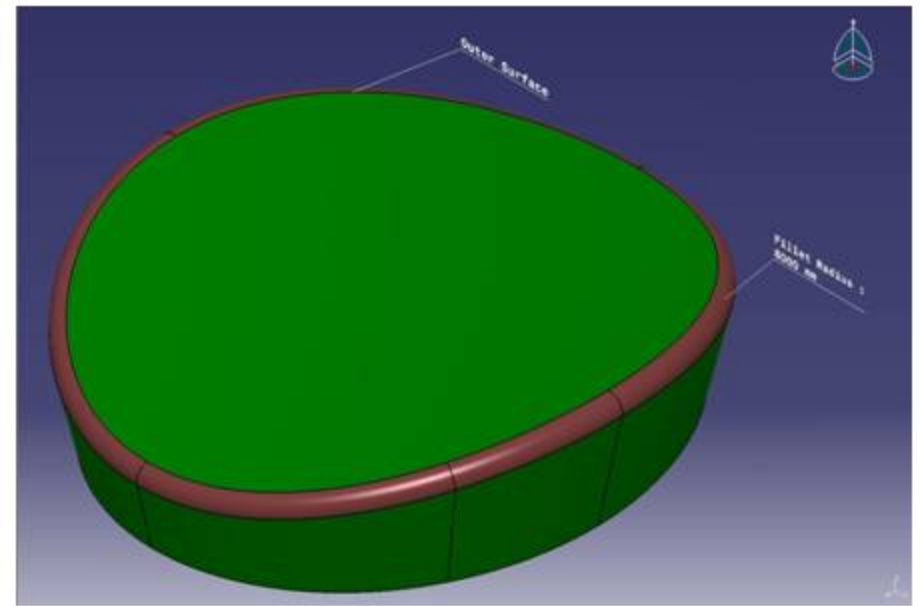
Base Ellipse



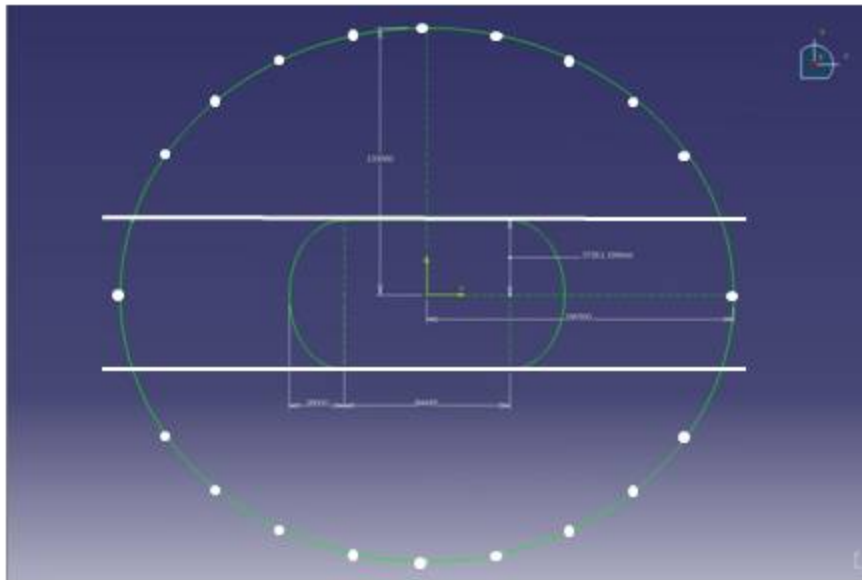
Side Walls



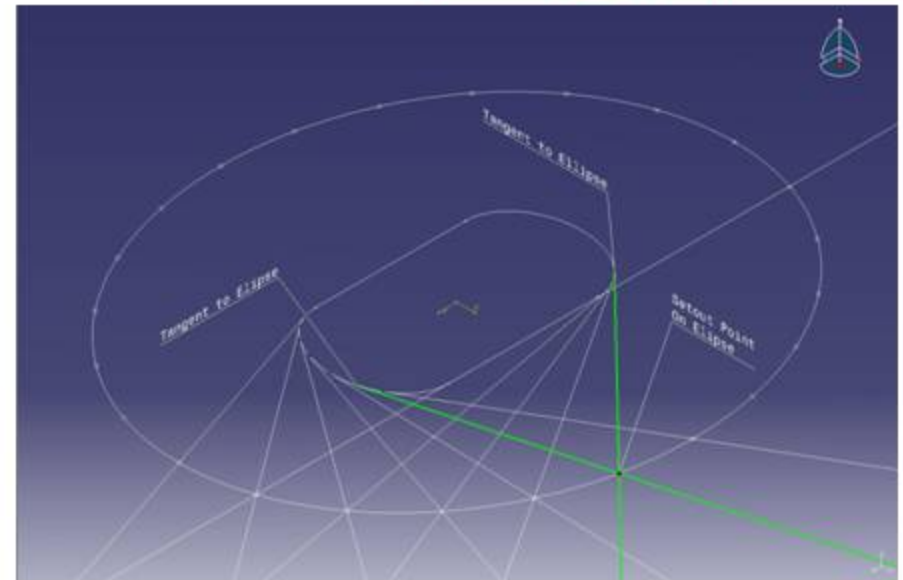
Roof Patch



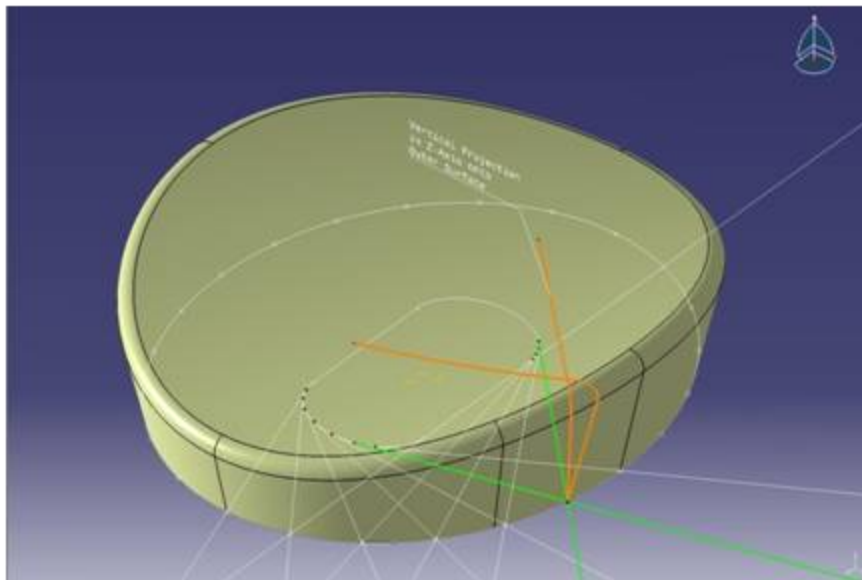
Edge Fillet



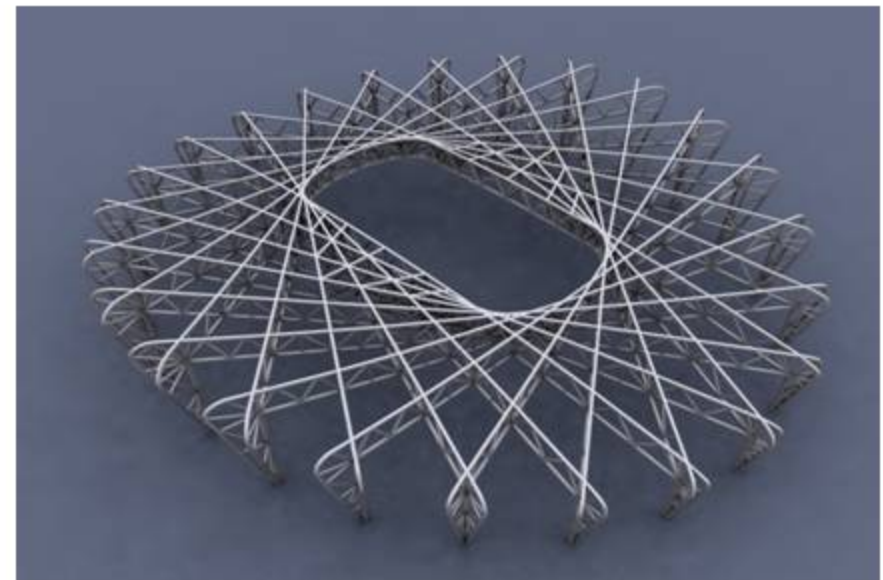
Primary Support



Primary Frame Lines

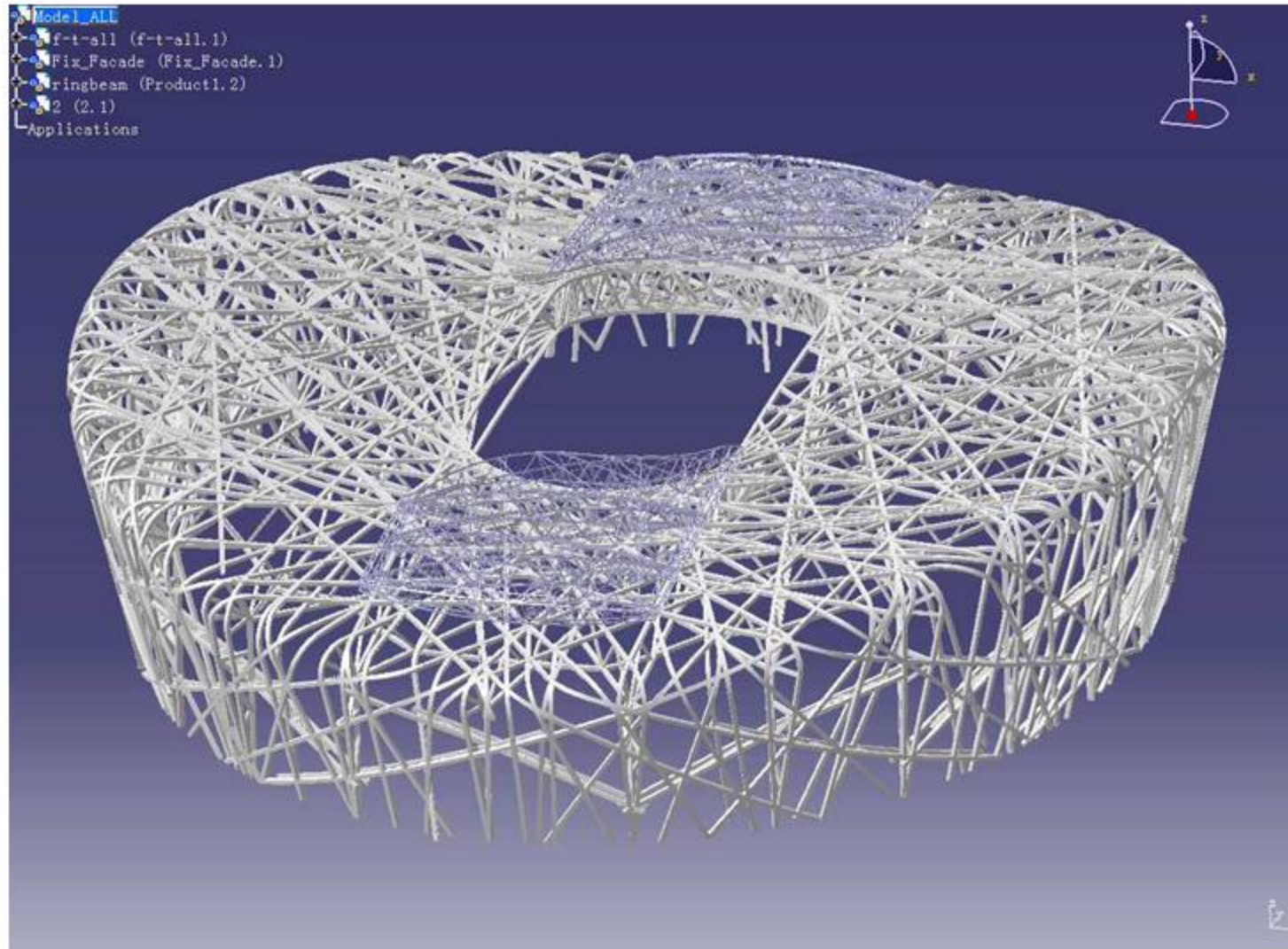


Projected Frame Lines

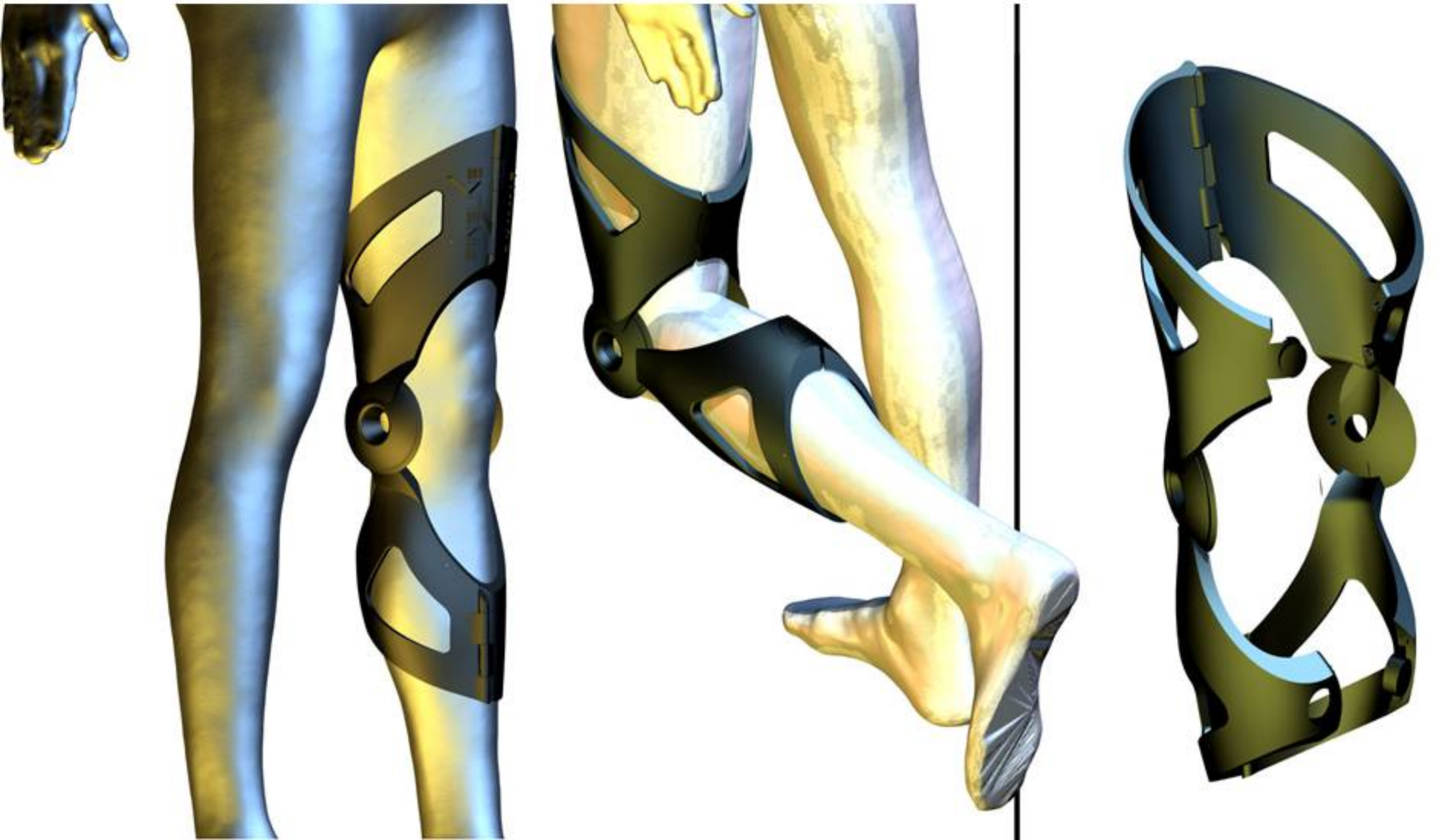


Edge Fillet

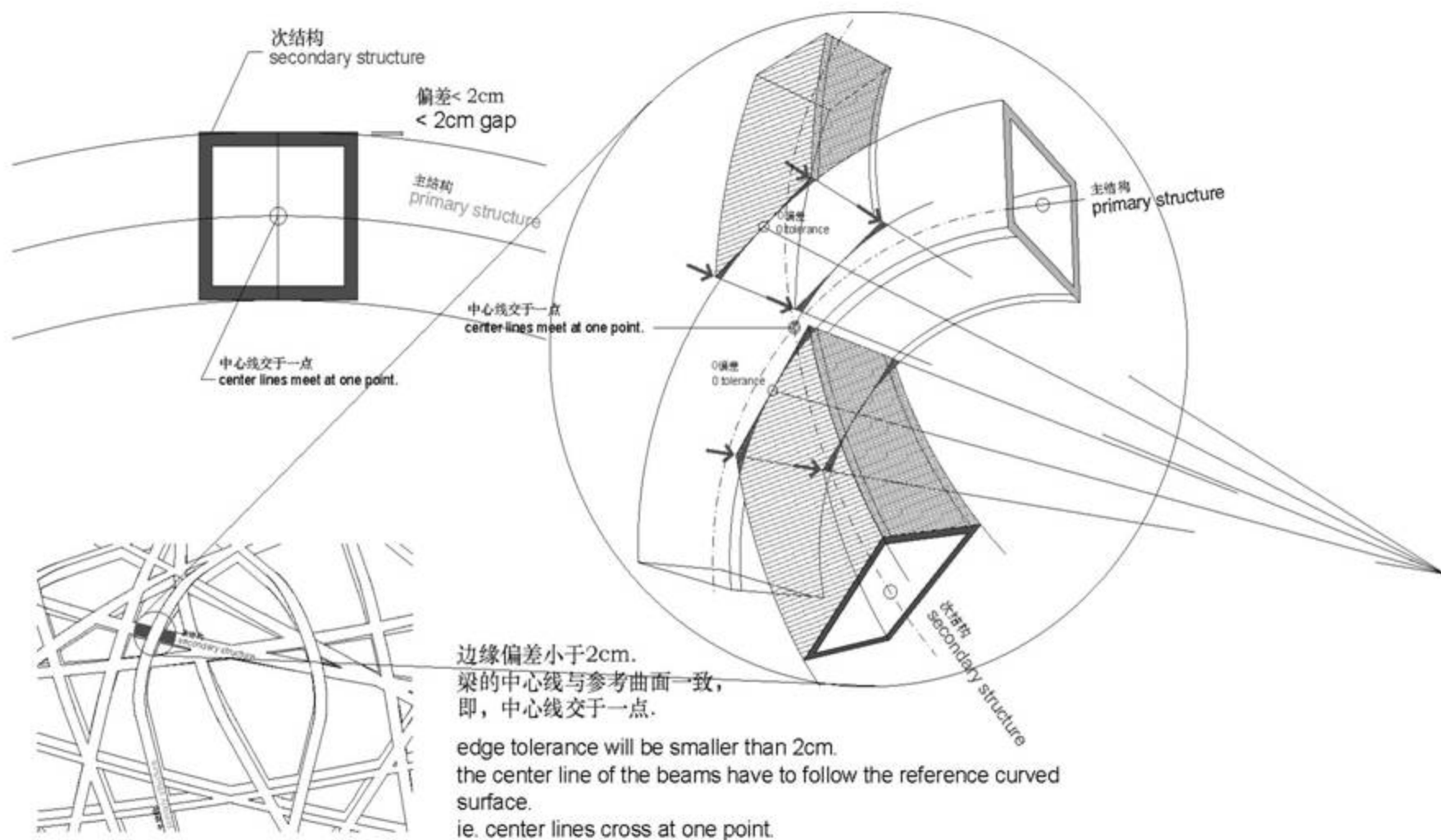
Geometry – Structural Model



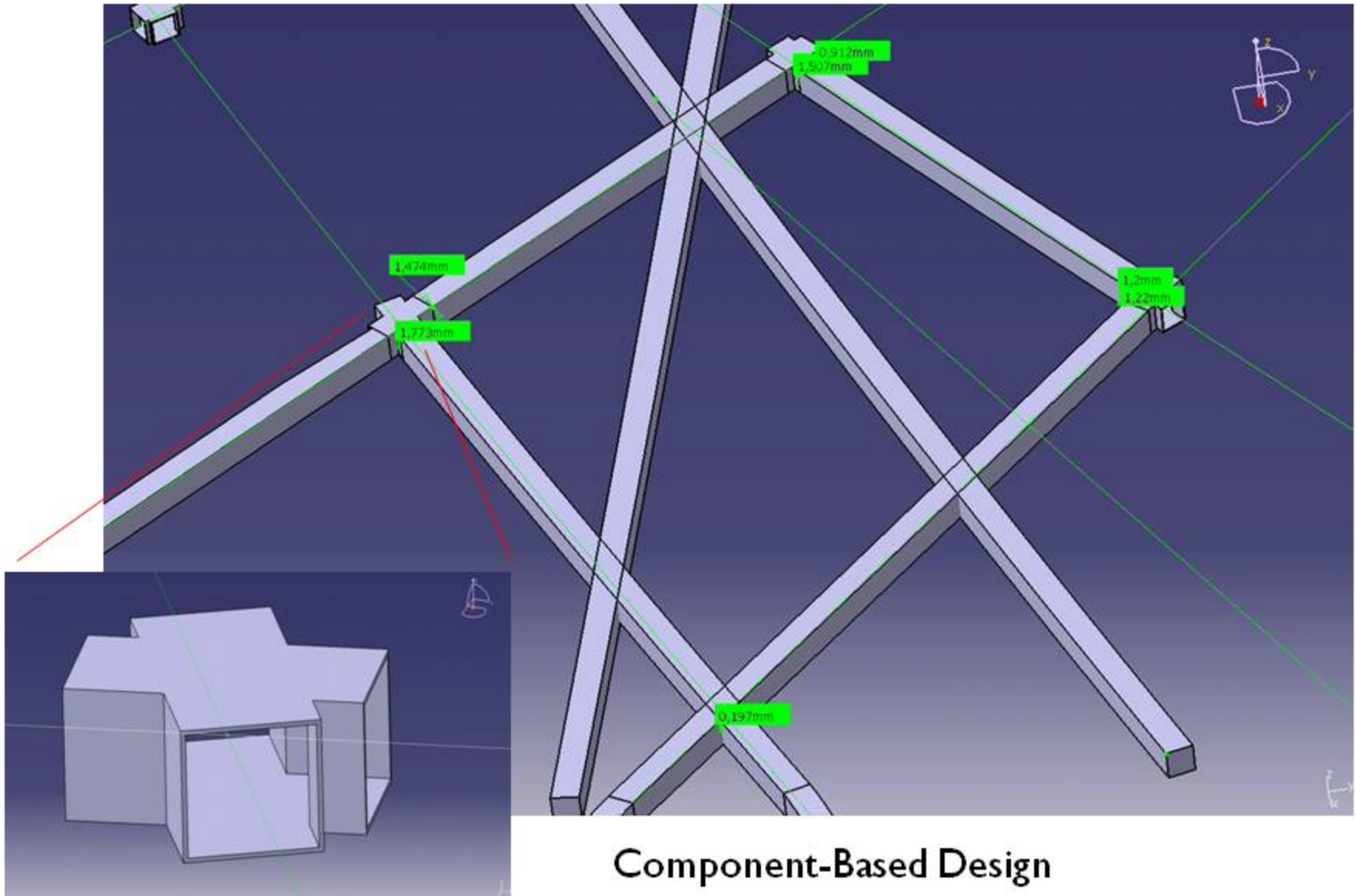
External data can influence an overall model



Build 'intelligent assistance' into a geometric model

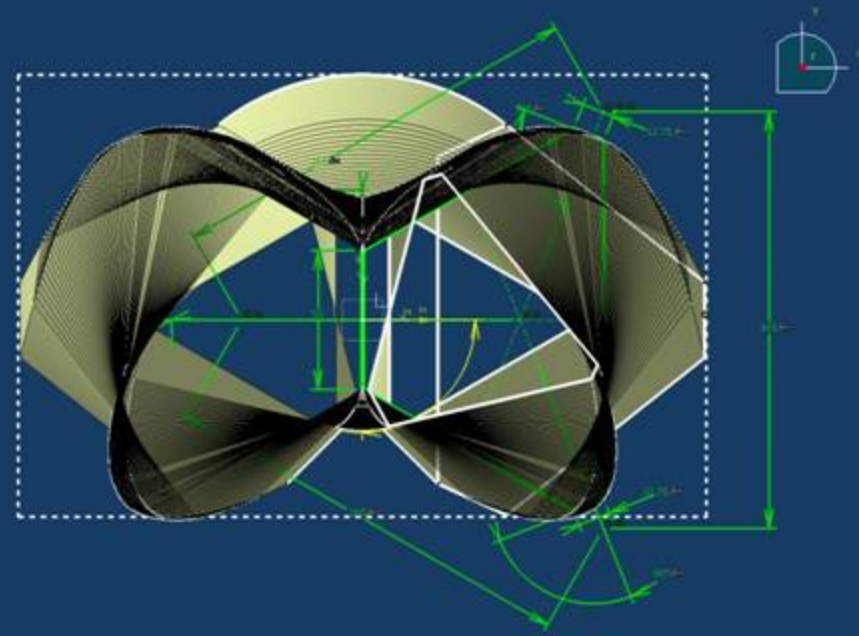
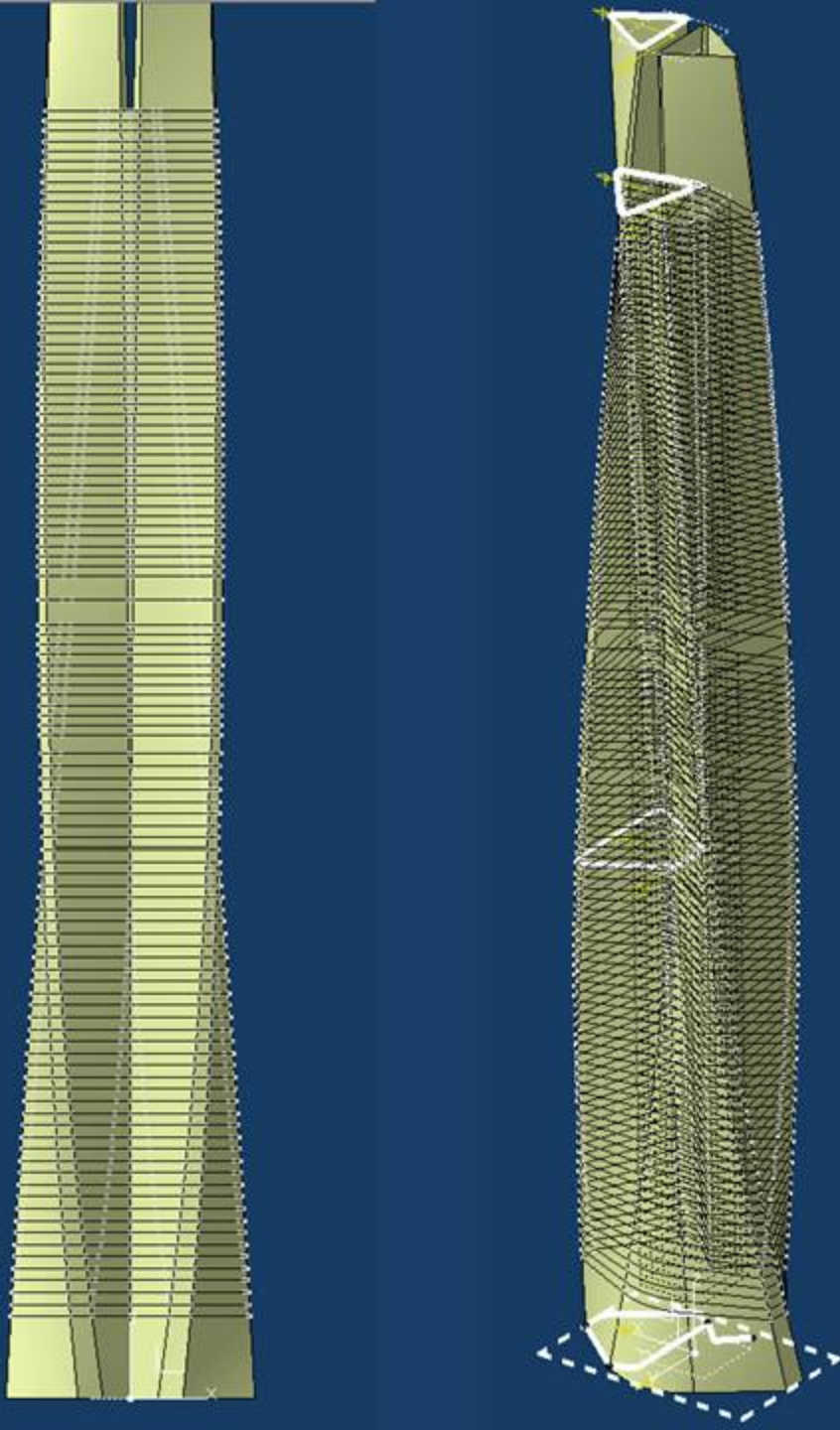


Build 'intelligent assistance' into a geometric model



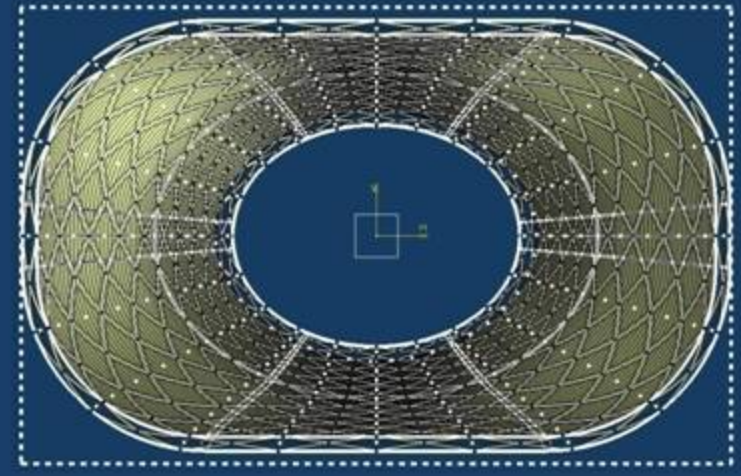
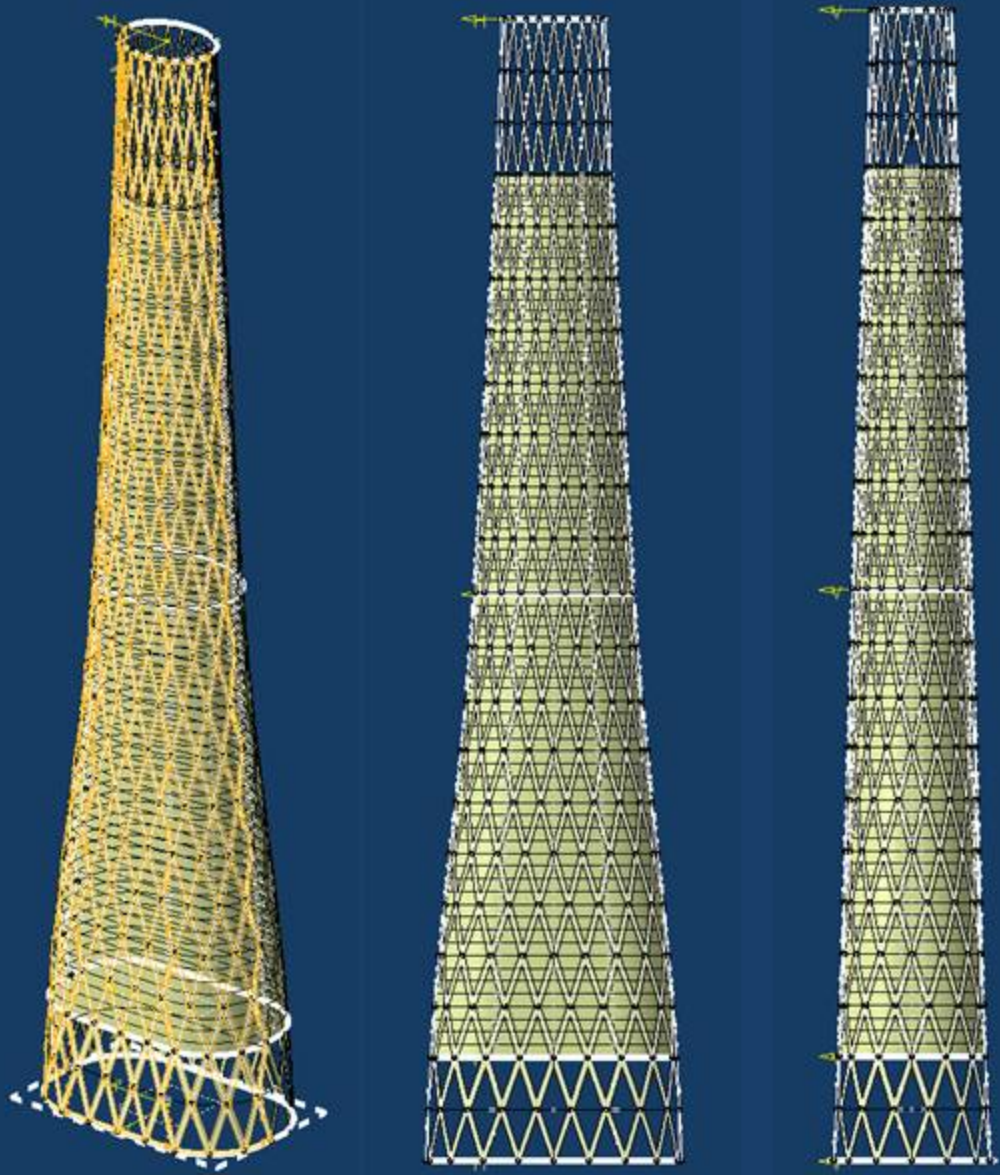
Component-Based Design

Build 'intelligent assistance'
into a geometric model



Transbay tower competition,
SOM SF

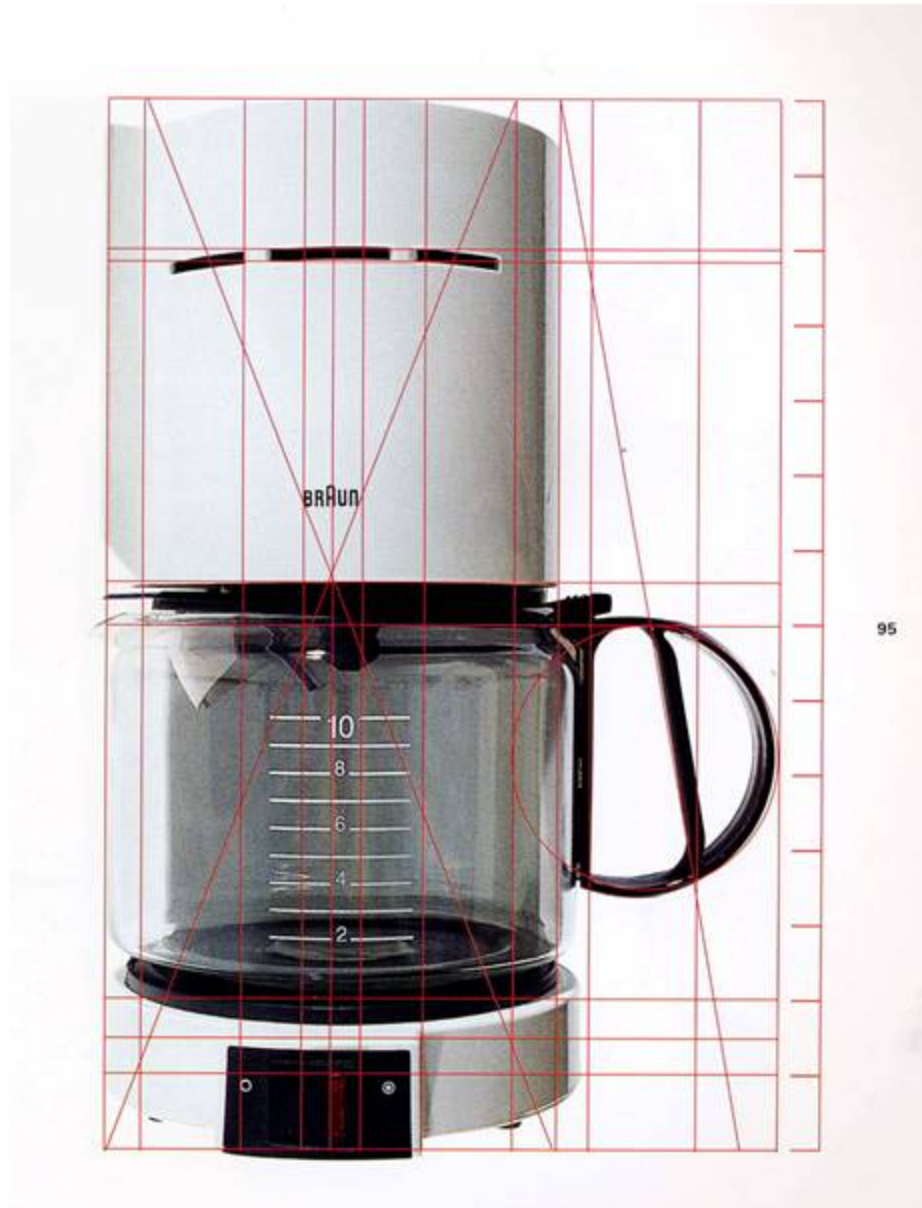
Build 'intelligent assistance'
into a geometric model



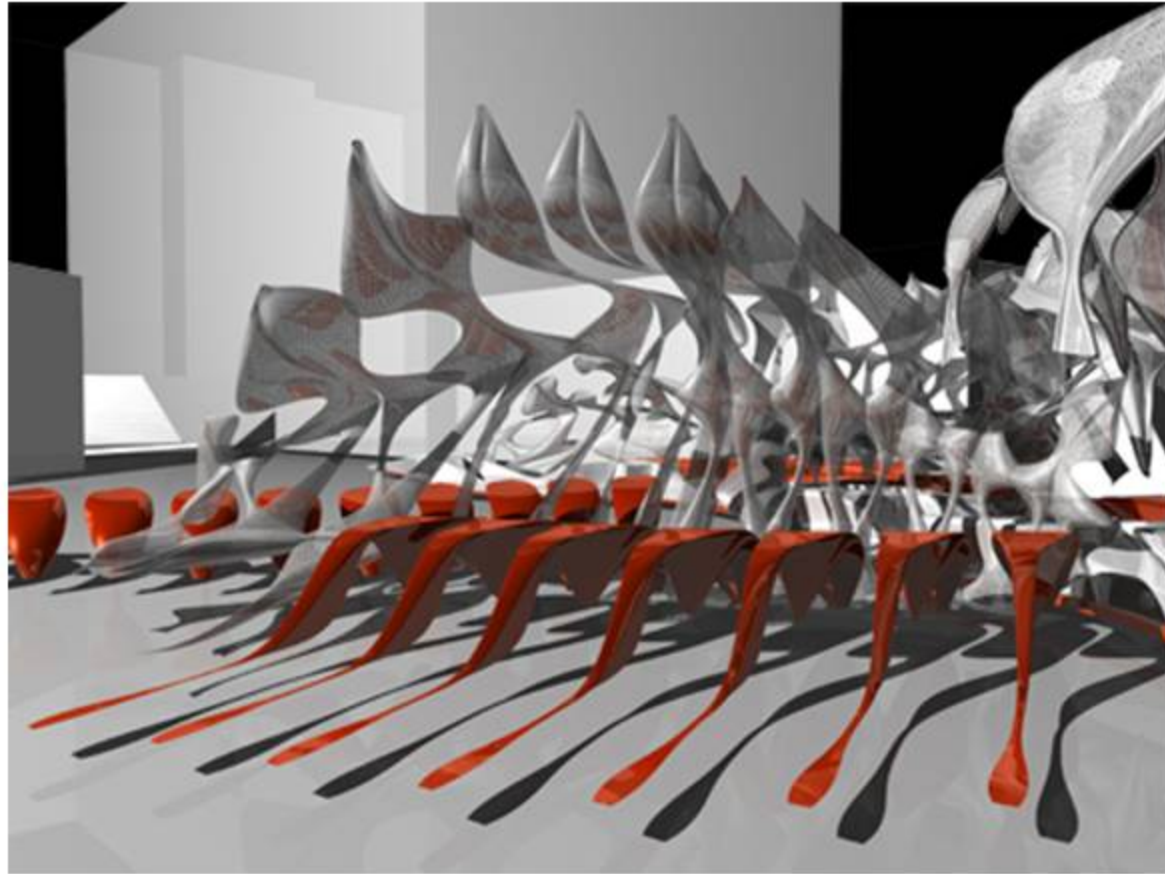
Variation 12 – mid footprint (ellipse) major radius = 170' (150')
mid footprint (ellipse) minor radius = 125' (150')
top footprint minor radius = 85' (110'); mid footprint height = 600' (500')

**Transbay tower competition,
SOM SF**

Proportion schemes can be 'built into' the CAD model



Designer can unload work to the computer



Instantiate



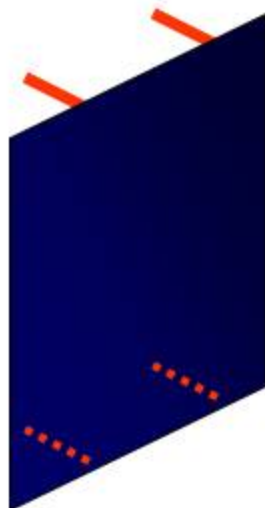
Instantiate



Panelized Cladding System

PanelTypes

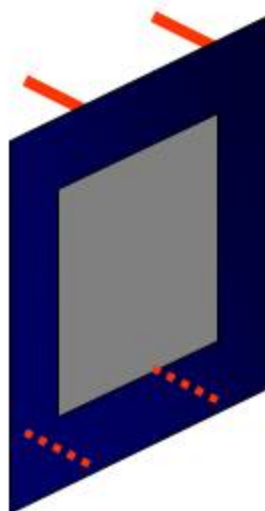
Standard



Corner – Concave



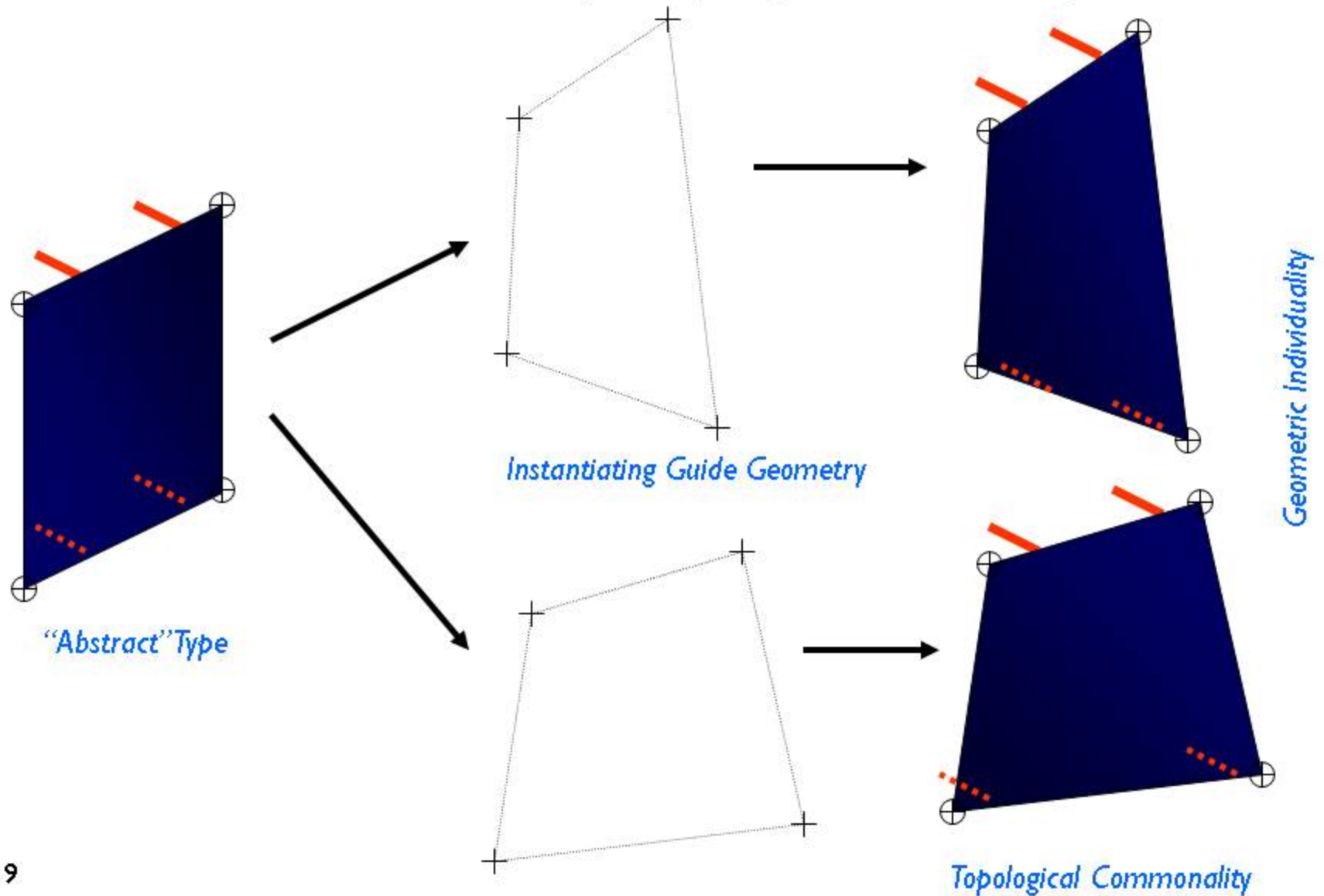
Window



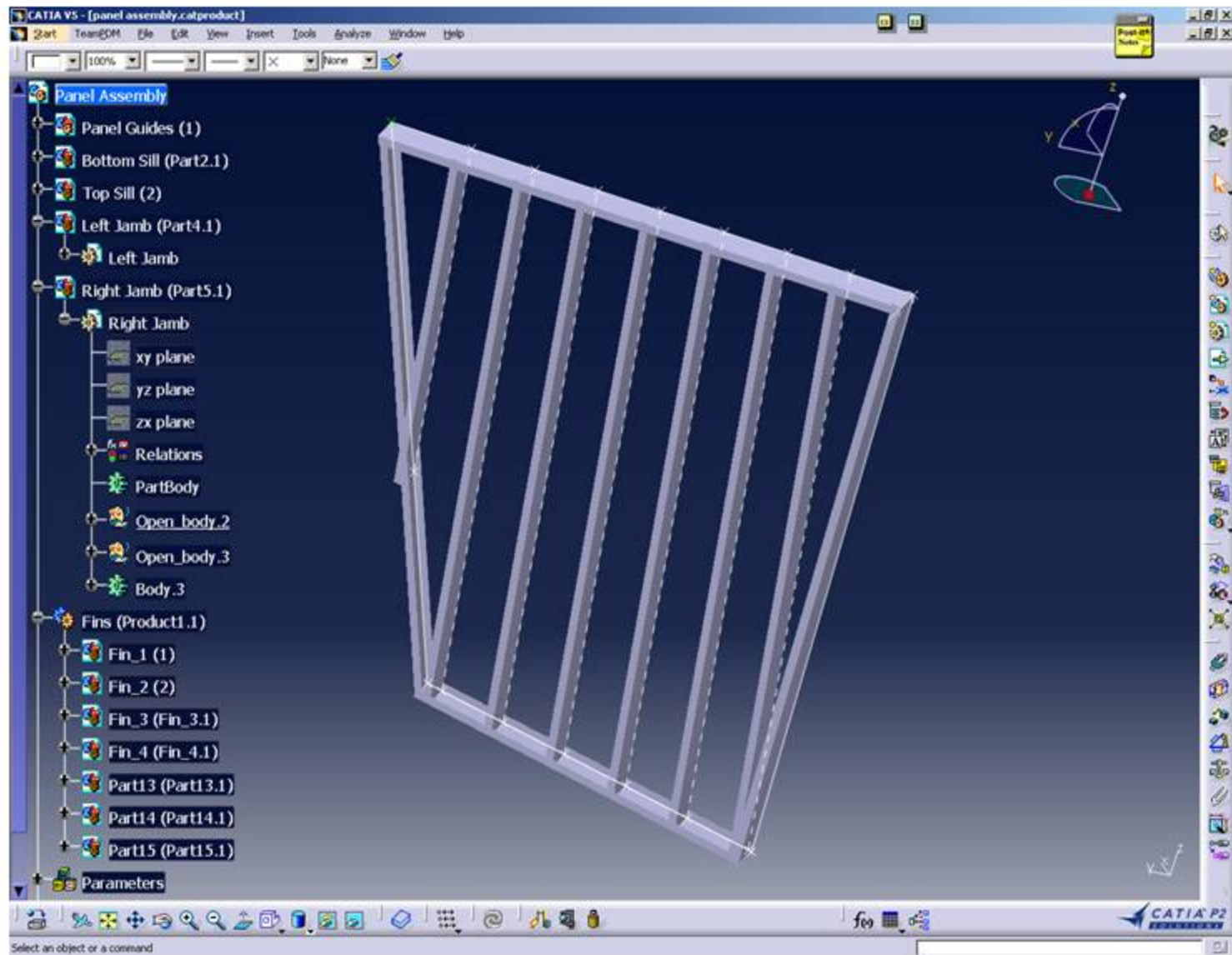
Corner – Convex



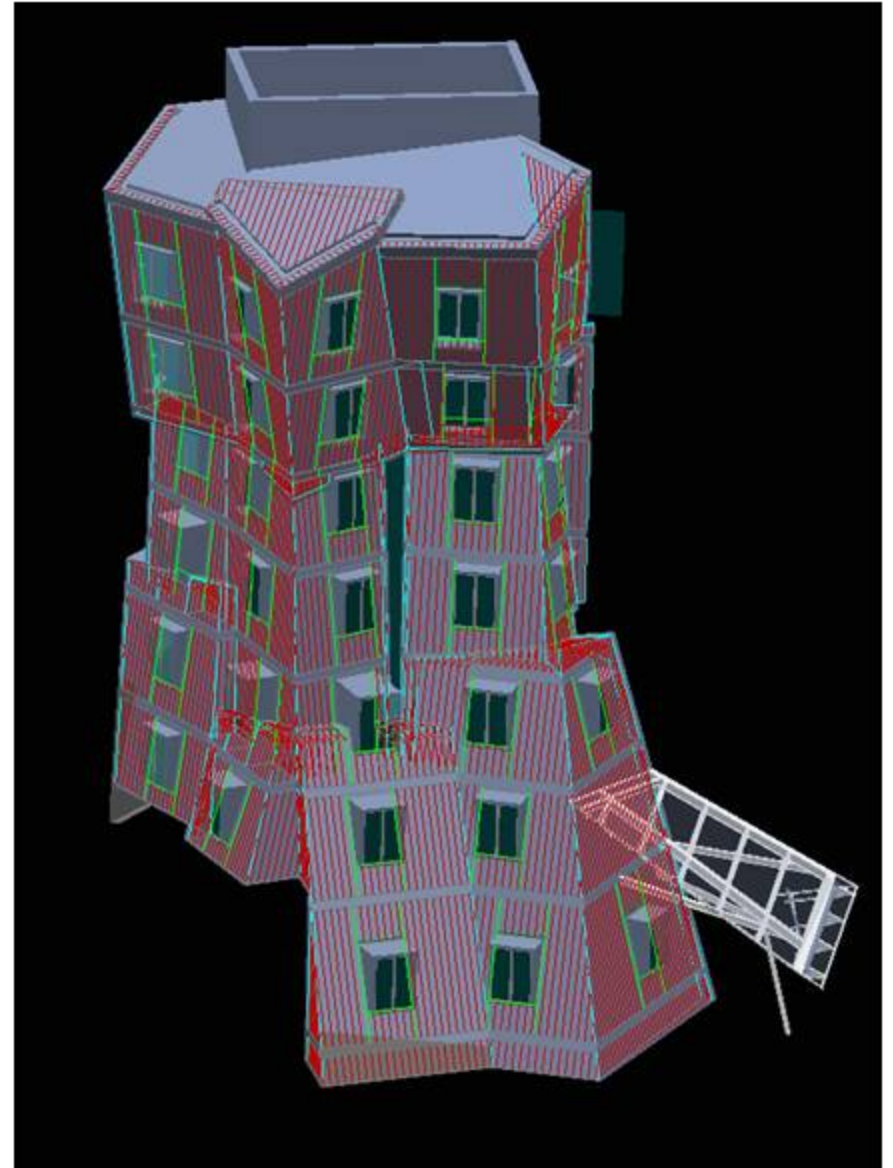
Geometric Individuality vs. Topological Commonality



Individual Panel



Panelized Cladding System



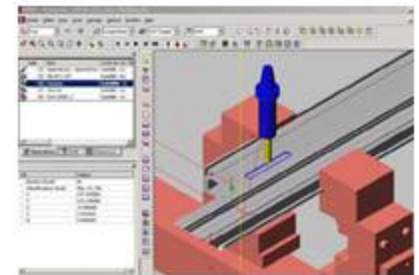
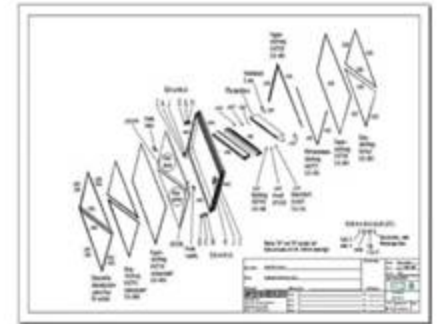
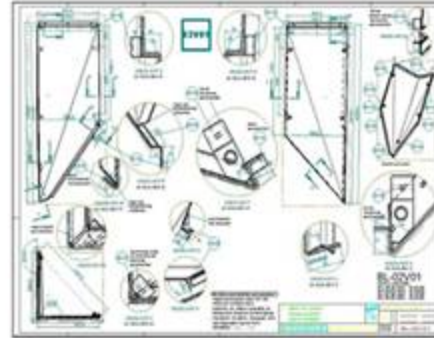
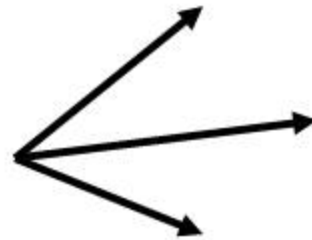
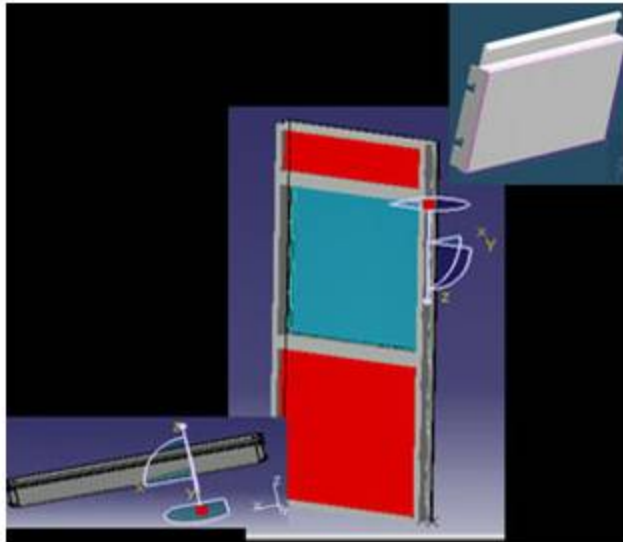
Panelized Cladding System: Architectural model



Panelized Cladding System: Mathematical model

Surface ID	Building Face	System Type	Glass Type	Is Operable	Element #	Subelement #	Area (mm ²)	Perimeter (mm)	P1 X	P1 Y	P1 Z	P2 X	P2 Y	P2 Z
37653759-fb5e-46f6-bda8-77499d625e64	XX	XX	XX	XX	Element_1	XX	XX	8493.897589	25366.557	-576.77454	7196.1681	25349.668	-571.12563	7235.7187
a44c27bd-ea3e-4e92-8324-e9f95a81d2f5	C-3-38	EWS-3	30 no	no	1	9	491725.8002	3566.688911	26021.107	-92.953872	6094.9299	25366.557	-576.77454	7196.1681
8cc008bb-1c07-4fa5-9203-94c11d3ee70	C-3-38	EWS-3	30 no	no	1	8	472973.8045	4094.755506	26720.263	848.71534	5214.3372	25940.788	-768.83742	5851.7211
8e55d921-d3ef-4954-9d29-211109e1b216	C-3-38	EWS-3	30 no	no	1	7	472308.6844	4060.347882	26720.263	848.71534	5214.3372	26343.569	-334.46178	5150.2406
1e339314-2143-4c29-8b46-1ef06746331e	C-3-38	EWS-3	30 no	no	1	6	268046.2944	2222.300848	26343.569	-334.46178	5150.2406	25940.788	-768.83742	5851.7211
a33badd8-55e9-45a3-9821-a0b311be0c4	C-3-38	EWS-3	30 no	no	1	5	254186.5809	3015.372456	26720.263	848.71534	5214.3372	26343.569	-334.46178	5150.2406
af2a133e-43b8-4577-b7ea-ba90a49671a2	C-3-38	EWS-3	30 no	no	1	4	132418.6495	1736.931076	26343.569	-334.46178	5150.2406	26237.749	-868.20833	5152.5563
1836488c-c773-4f6d-8ac6-7c06c309660	C-3-38	EWS-3	30 no	no	1	3	50276.37078	899.4501676	26237.749	-868.20833	5152.5563	26366.351	-909.56197	4991.4737
7fe5c3e1-2d88-441a-9551-000c7fd943ee	C-3-38	EWS-3	30 no	no	1	2	172658.0834	1943.92577	26237.749	-868.20833	5152.5563	25940.788	-768.83742	5851.7211
82a5fbc9-140d-4a62-9920-b01e7276373d	C-3-38	EWS-3	30 no	no	1	1	355944.3965	3543.999578	25912.548	-1006.4733	5766.2106	25940.788	-768.83742	5851.7211
7084952-a7a4-91dd-8d52-6e1778ea34e1	XX	XX	XX	XX	Element_2	XX	XX	8546.610297	25347.859	-576.58148	7234.7947	25421.139	-65.776096	7424.3274
00a51471-8515-45af-8a4c-75704be1cd01	C-3-38	EWS-3	30 no	no	2	6	416280.8099	3930.205294	25347.859	-570.58148	7234.7947	25421.139	-65.776096	7424.3274
edd4b15c-cbd3-4a2e-a9d3-34743a73d6	C-3-38	EWS-3	30 no	no	2	5	707896.1265	4216.760316	25366.557	-576.77454	7196.1681	26239.862	842.17608	6494.6753
3687a279-1393-4567-b246-6f920c776362	C-3-38	EWS-3	30 no	no	2	4	728027.7896	4748.684785	26239.862	842.17608	6494.6753	27061.746	1742.7511	5565.9508
82a5c346-af68-433a-97b5-1d0da29912d	C-3-38	EWS-3	30 no	no	2	3	640626.1659	4561.654905	26021.107	-92.953872	6094.9299	27061.746	1742.7511	5565.9508
604442c8-8f65-431c-9132-162a360a95a2	C-3-38	EWS-3	30 no	no	2	2	142001.2945	2545.307244	27061.746	1742.7511	5565.9508	27232.798	1929.9521	5372.8904
03e5f1c1-e02b-49d7-b026-5b136c1bd3e	C-3-38	EWS-3	30 no	no	2	1	247809.2985	2942.825515	27232.798	1929.9521	5372.8904	26720.263	848.71534	5214.3372
e06b473-ab9c-49ff-8e32-9d290c464c	XX	XX	XX	XX	Element_3	XX	XX	9830.024168	25746.448	959.35289	7854.1231	25444.503	-89.834605	7397.786
887c303c-a5cc-43f5-bf8a-eb7711989556	C-3-38	EWS-3	30 no	no	3	7	771735.2775	4772.777527	25726.448	959.35289	7854.1231	25444.503	-89.834605	7397.786
19807404-c206-45d4-bbd5-d1b487669223	C-3-38	EWS-3	30 no	no	3	6	736823.0164	4741.802985	26580.943	1755.4266	6961.8304	26239.862	842.17608	6494.6753
e14822c3-94d8-4e19-81c0-9ea3ec0211a3	C-3-38	EWS-3	30 no	no	3	5	756942.8214	4761.92405	26580.943	1755.4266	6961.8304	26239.862	842.17608	6494.6753
86740686-6441-411b-8462-8eba04a6f6a4	C-3-38	EWS-3	30 no	no	3	4	730600.5294	4739.800184	26239.862	842.17608	6494.6753	27460.57	2574.9142	6043.3101
286af75a-bef1-d9c1-8448-e3c23d7e6017	C-3-38	EWS-3	30 no	no	3	3	311872.637	3104.995367	27460.57	2574.9142	6043.3101	27837.605	2926.1716	5649.6009
fd9033d-b192-43a6-e41c-03f5049af8d	C-3-38	EWS-3	30 no	no	3	2	149825.6305	2934.085564	27061.746	1742.7511	5565.9508	27837.605	2926.1716	5649.6009
649d63b-26c3-49d7-809a-0348b4d4d9d	C-3-38	EWS-3	30 no	no	3	1	253761.0366	2919.241847	27837.605	2926.1716	5649.6009	27232.798	1929.9521	5372.8904
81625e0f-6c3c-4e65-8a8a-a7325566625e	XX	XX	XX	XX	Element_4	XX	XX	10526.8775	26317.553	1942.7213	8489.2908	25726.448	959.35289	7854.1231
7ad5b3ca-70e2-4f91-8534-9e294368c095	C-3-38	EWS-3	30 no	no	4	7	892071.2067	5063.81013	26317.553	1942.7213	8489.2908	25726.448	959.35289	7854.1231
80303252-5711-4ee2-863a-ead36aaf1e48	C-3-38	EWS-3	30 no	no	4	6	883706.8876	5056.273878	27204.782	2692.0168	7602.8801	26580.943	1755.4266	6961.8304
96aac1e5-8eac-446c-b670-8782727c6d9	C-3-38	EWS-3	30 no	no	4	5	907390.8754	5112.788899	27204.782	2692.0168	7602.8801	26580.943	1755.4266	6961.8304
7b7b9d81-6212-4761-be26-112934b7542d	C-3-38	EWS-3	30 no	no	4	4	901092.8251	5107.50288	26580.943	1755.4266	6961.8304	28118.105	3463.3504	6800.4149
020a5e86-df6a-40a2-9dda-09edc5720027	C-3-38	EWS-3	30 no	no	4	3	462487.7197	3780.452423	28118.105	3463.3504	6800.4149	28573.557	3879.1401	6219.24
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e31dad0c-2ed5-4f9a-baff-47ca015e58f	C-3-38	EWS-3	30 no	no	4	1	305858.1224	3175.374728	28573.557	3879.1401	6219.24	27837.605	2926.1716	5649.6009
6c39eb5e-1a51-4a01-958c-671eacadd209	XX	XX	XX	XX	Element_5	XX	XX	10720.52764	28071.143	3502.2159	8351.2271	29607.616	4738.527	6847.9626
e00380ba-0f40-4988-830f-9e6bc78bee0e	C-3-38	EWS-3	30 no	no	5	7	968975.0672	5212.608779	28071.143	3502.2159	8351.2271	26317.553	1942.7213	8489.2908
891a9d73-18b6-43a7-8eed-d029e713c026	C-3-38	EWS-3	30 no	no	5	6	960563.5069	5214.216325	28071.143	3502.2159	8351.2271	27204.782	2692.0168	7602.8801
c7544981-facc-4b71-bf65-d8ab1a12e501	C-3-38	EWS-3	30 no	no	5	5	966627.4677	5286.046982	28071.143	3502.2159	8351.2271	27204.782	2692.0168	7602.8801
91618c52-1c6a-411a-871b-86d9308afa58	C-3-38	EWS-3	30 no	no	5	4	988648.1962	5288.072048	27204.782	2692.0168	7602.8801	29000.778	4250.2394	7441.6849
e2bd4ba2-d85c-4960-9006-e538c7bc1a3	C-3-38	EWS-3	30 no	no	5	3	477733.142	3914.851466	29000.778	4250.2394	7441.6849	29451.059	4612.5545	7001.138
6af5087e-c088-4f63-b562-0dedca7fa00	C-3-38	EWS-3	30 no	no	5	2	510634.8013	3948.643679	28118.105	3463.3504	6800.4149	29451.059	4612.5545	7001.138
09dc7997-3145-47ae-80a0-e3c6f6980409	C-3-38	EWS-3	30 no	no	5	1	332306.7839	3226.090563	29451.059	4612.5545	7001.138	28573.557	3879.1401	6219.24
c1658ba-88e5-43d3-aa61-9618ebcbda2	XX	XX	XX	XX	Element_6	XX	XX	10537.7586	28230.116	3445.2776	10106.476	29189.857	4156.2782	9202.3434
32c50fa2-e40e-41e5-8a6e-cf49fc001d02	C-3-38	EWS-3	30 no	no	6	5	1087841.08	5517.606526	28230.116	3445.2776	10106.476	29189.857	4156.2782	9202.3434
8f17eb08-4d8c-4479-a259-0b6acc20a09	C-3-38	EWS-3	30 no	no	6	4	1097876.459	5526.966083	27137.14	2760.4344	9259.9844	29189.857	4156.2782	9202.3434
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cfed697c-2936-40f9-aa52-9964689af9c9	C-3-38	EWS-3	30 no	no	6	2	756229.5301	4047.365319	30119.492	4898.3016	8292.8012	29000.778	4250.2394	7441.6849
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48c3c821-9e3c-439a-adce-2b90b31cb945	C-3-38	EWS-3	30 no	no	7	6	1270889.443	5970.865142	29573.743	4108.4323	10995.373	28230.116	3445.2776	10106.476
be168e9f-61ad-4a9f-afce-628902090c5b	C-3-38	EWS-3	30 no	no	7	5	1270889.442	5970.865142	29189.857	4150.2782	9202.3434	30533.484	4813.4329	10191.241
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180c8969-36cb-40e5-8a98-006b839c71da	C-3-38	EWS-3	30 no	no	7	2	262415.4139	3755.511624	30119.492	4898.3016	8292.8012	31290.586	5362.0203	9481.9262
3df2e48c-3269-496c-9215-373222b2c14	C-3-38	EWS-3	30 no	no	7	1	429084.6811	3935.036383	31290.586	5362.0203	9481.9262	30308.993	5050.7617	8107.3965

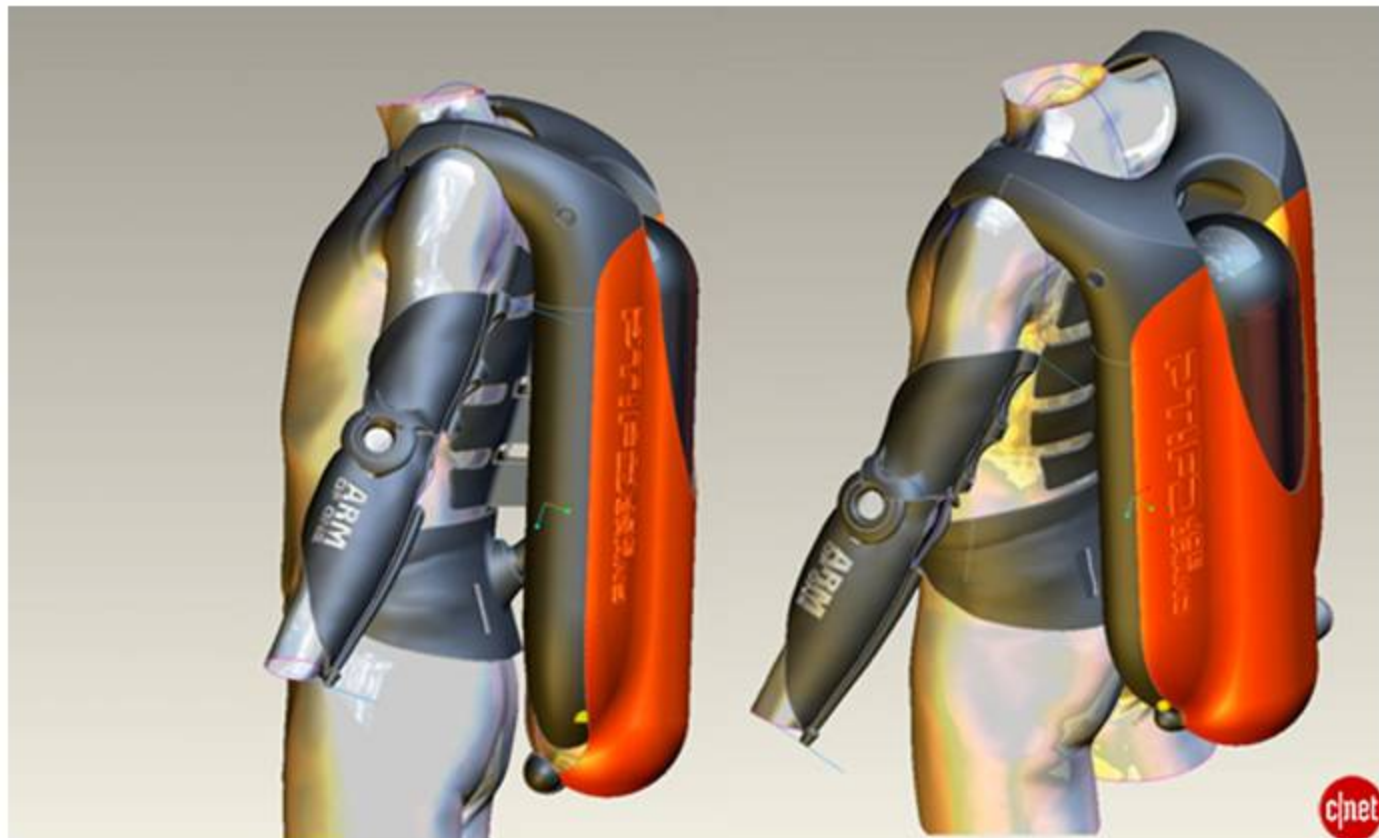
Panelized Cladding System: Parametric elements to Production data



Panelized Cladding System: Installation



Allow for 'mass customization'



Invite the user to the process

MY DRIFT DORE
IS INDIVIDUALLY DESIGNABLE

EUR 259.00

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