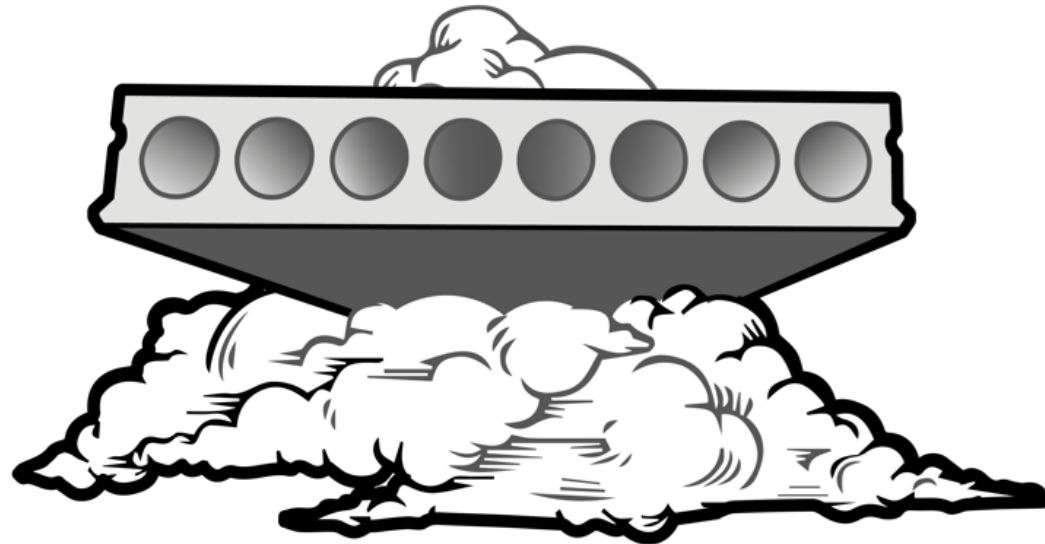


IPHA TT May 2019

Software System : IMPACT Production



Things we picked up earlier today

”The future is not far away, it is already here”

-Sabine Erspamer

25-05-2019

”In the near future we invision you can pick up your smart phone,
and see the hollow core is being delivered tomorrow at 8:00”

-Karl Enderes

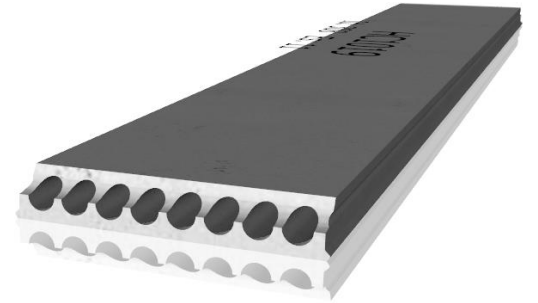
25-25-2019

”You are an idiot if you are not using the best tool possible”

-Manfred Fischer, 1972

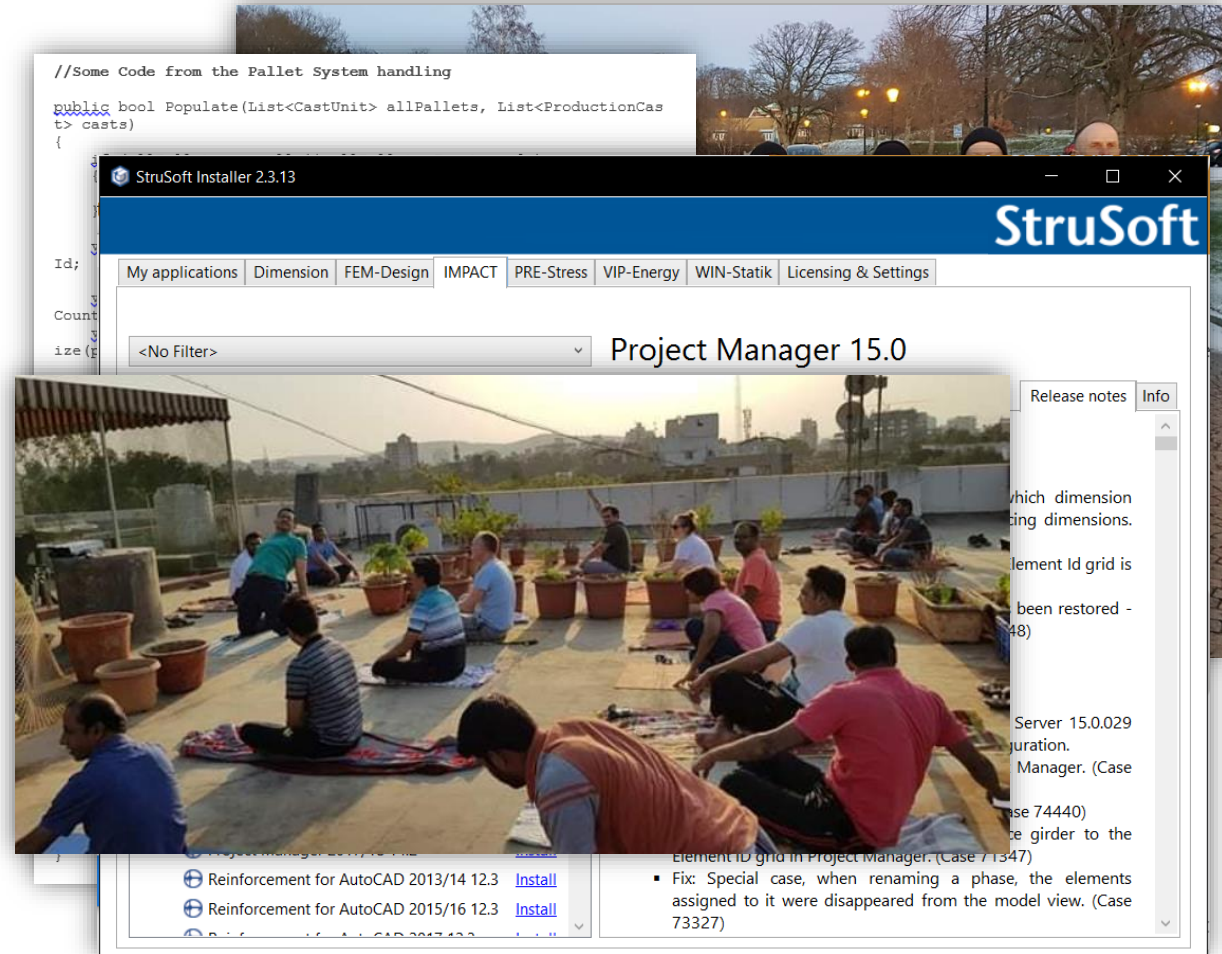
The need for a common data sharing platform for precast concrete professionals

- Strusoft has been developing software since the 80´ s, back then under Skanska, one of the biggest contractors in the world.
- One of the software systems we developed was IMPACT, a system allowing for automatic drawing of Precast Concrete elements.
- In the late 2000´ s we recognised a need and a gap between the drawing departments, and the project management, production, transport and erection. – This Kickstarted the IMPACT Production project.

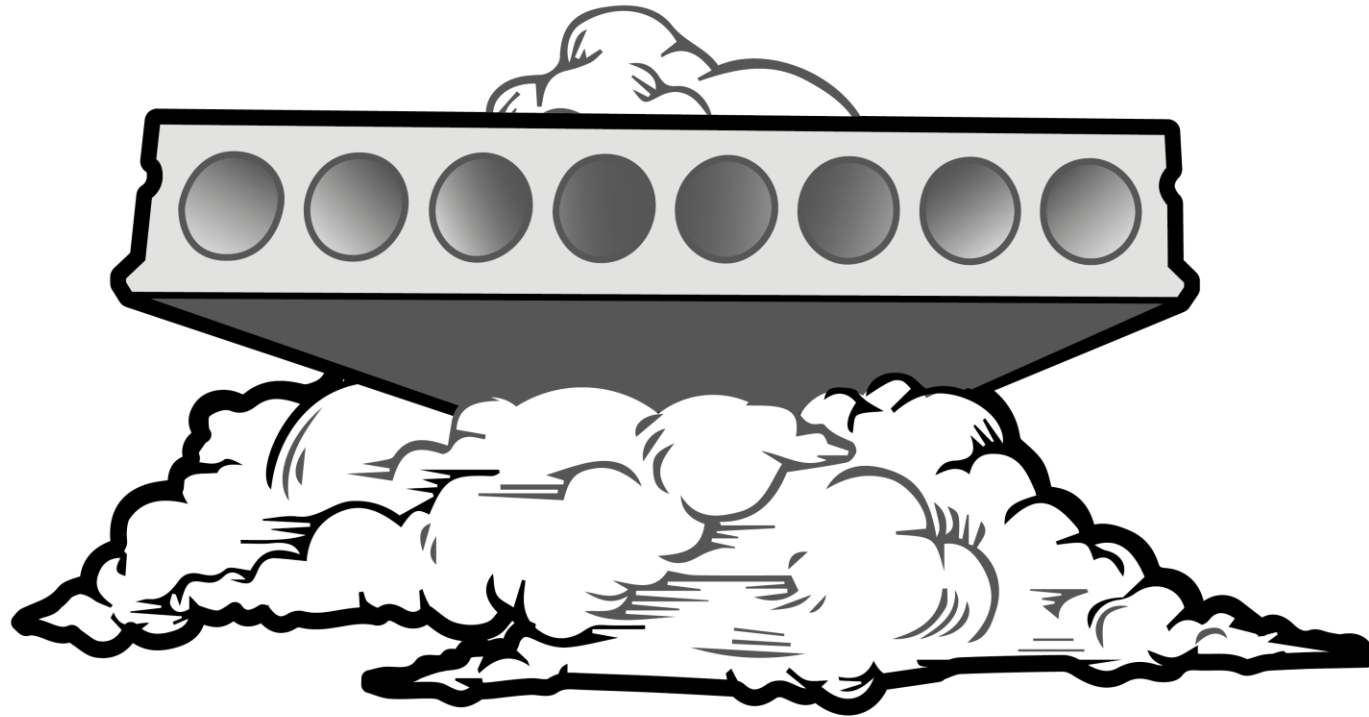


”The project” Team Efforts

- From 2012-2019, more than 40.000 man hours has gone into development of IMPACT production.
- More than 370.000 lines of code.
- Continously developing new versions.
- Established Support network across time zones.



What is IMPACT(Production)?



- Software that brings all actors together in the Precast process
- Data for everyone connected through SQL database
- Production planning, cost calculation, load planning, erection planning and more.
- Simple 3D model and table based user interfaces that maximizes output with minimum input. All created from the SQL.
- All live, continuously updated and in the cloud!



IMPACT **15**

What is an SQL database?

The screenshot displays the Microsoft SQL Server Enterprise Edition interface. On the left, the Object Explorer shows a tree view of the database schema, with 'dbo.IMP_PROJECT' selected. The central pane shows a data table with the following columns and data:

FACTORY	PROJECT	PROJECT_T...	STATUS	NAME	DESCRIPTI...	TEXT_3	TEXT_4	T ^
1101	12312	2	1					
1101	12321	2	1					
1101	12324	2	1					
1101	12332	2	1	11				
1101	12334	2	1	Impact ro's ...				
1101	12344	2	1					
1101	12345	2	1	123	1234	412	412	4'
1101	1234E	2	1					
1101	12378	2	1	Copenhagen...	100 Beton e...	Vestebro 30	91922186	90
1101	12458	2	1					
1101	13_14	3	1	IMPACT Pre...	Project desc...	Project desc...		
1101	13232	2	1					
1101	18074	2	1	Hotel Viborg				
1101	22020	2	1	Titel	AdresseBes...	TExt 3	Text4	
1101	23112	2	1					
1101	31232	2	1					
1101	39411	2	1	165208	Slagterihuse...	-		
1101	3EQ3W	2	1	Rp's ro's				
1101	41322	2	1	123	123	4124	4123	2'
1101	48825	2	1					
1101	54214	2	1	123	1234	122345		
1101	54872	2	1					
1101	56433	2	1	Project Title				
1101	58924	2	1					
1101	67859	2	1					
1101	68456	2	1					
1101	BATCH	2	1					
1101	CON01	2	1					
1101	DTEST	2	1					

On the right, the Properties window for '[Qry] Query1.dttq' is open, showing the following details:

- (Identity)**
 - (Name): Query1.dttq
 - Database Name: IMPACT_15
 - Server Name: nikolaj-pc\newimpact
- Query Designer**
 - Destination Table:
 - Distinct Values: No
 - GROUP BY Extension: <None>
 - Output All Columns: No
 - Query Parameter List: No parameters have been specified
 - SQL Comment: ***** Script for SelectTopNRows c
 - Top Specification: Yes

SQL Data to 3D models using a graphical engine

The image displays a multi-layered software interface for construction management. At the top, a navigation bar includes tabs for Model View, Summary, Follow-Up, Element Ids, Element Marks, Drawings, Settings, Components, DWG Viewer, and PDF Viewer. The main 3D view shows a perspective of a building's structural elements, with a coordinate system (X, Y, Z) visible. A Project Browser on the left lists the hierarchy: FA_INDUSTRIAL > Building 1 > Floor 1 > Prestressed Beam > Column > Hollow Core > Wall > Elevation > Settings > Element Marks > Components.

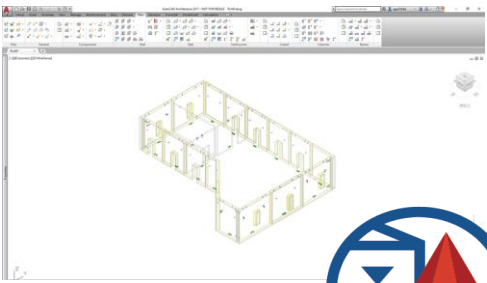
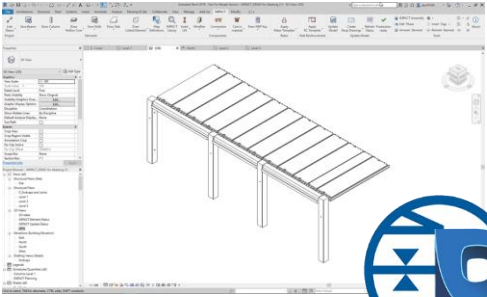
Below the 3D view, there are several data tables and planning tools. The 'Cast Planning' section includes a 'Calendar' and a 'Detailed View' of cast units. A table below shows project details:

Project	No	Delivery Date	Cost
TTIPHA	14	2019-05-29 08:00	1
TTIPHA	13	2019-05-29 08:00	1
TTIPHA	12	2019-05-29 08:00	8
TTIPHA	11	2019-05-29 08:00	12
TTIPHA	10	2019-05-29 08:00	13
TTIPHA	9	2019-05-29 08:00	12
TTIPHA	8	2019-05-29 08:00	9
TTIPHA	7	2019-05-29 08:00	13
TTIPHA	6	2019-05-29 08:00	14
TTIPHA	5	2019-05-29 08:00	8
TTIPHA	4	2019-05-29 08:00	13
TTIPHA	3	2019-05-29 08:00	13
TTIPHA	2	2019-05-29 08:00	11
TTIPHA	1	2019-05-29 08:00	10

Another table provides a detailed view of cast units, including columns for Division, West Factory, Prestressed, Cast Unit, Bed, Week, Slab1, Slab2, Total, Mass (ton), Volume (m3), Area (m2), Time (h), Cost (€K), and Element Count. A summary row indicates: 101192/1 20 ton 18.23 (20.00).

On the right, a mobile app interface shows a 'Cast' schedule with columns for Unit No, Type, and Status. A 3D navigation toolbar is also visible on the far right.

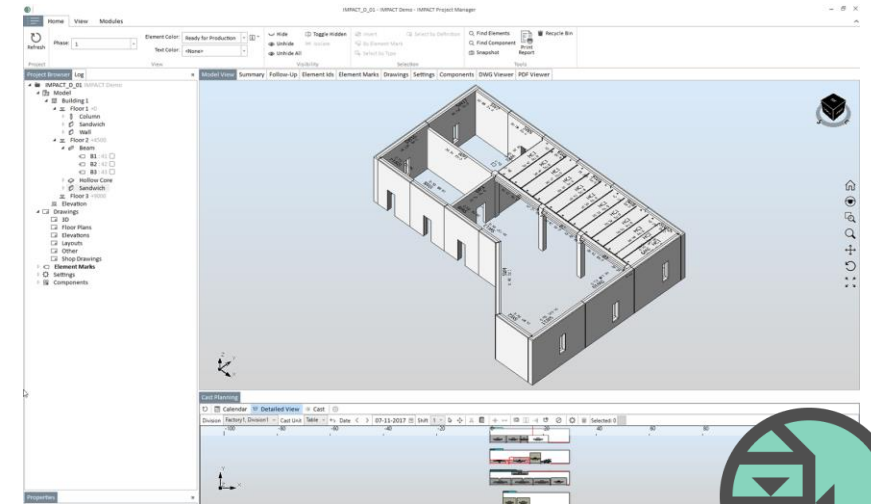
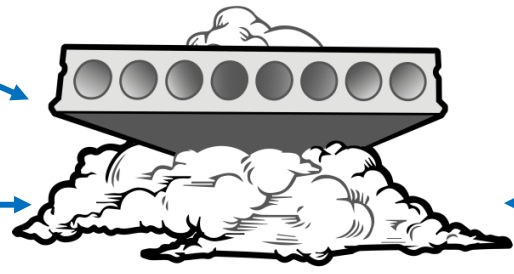
Working through a common database



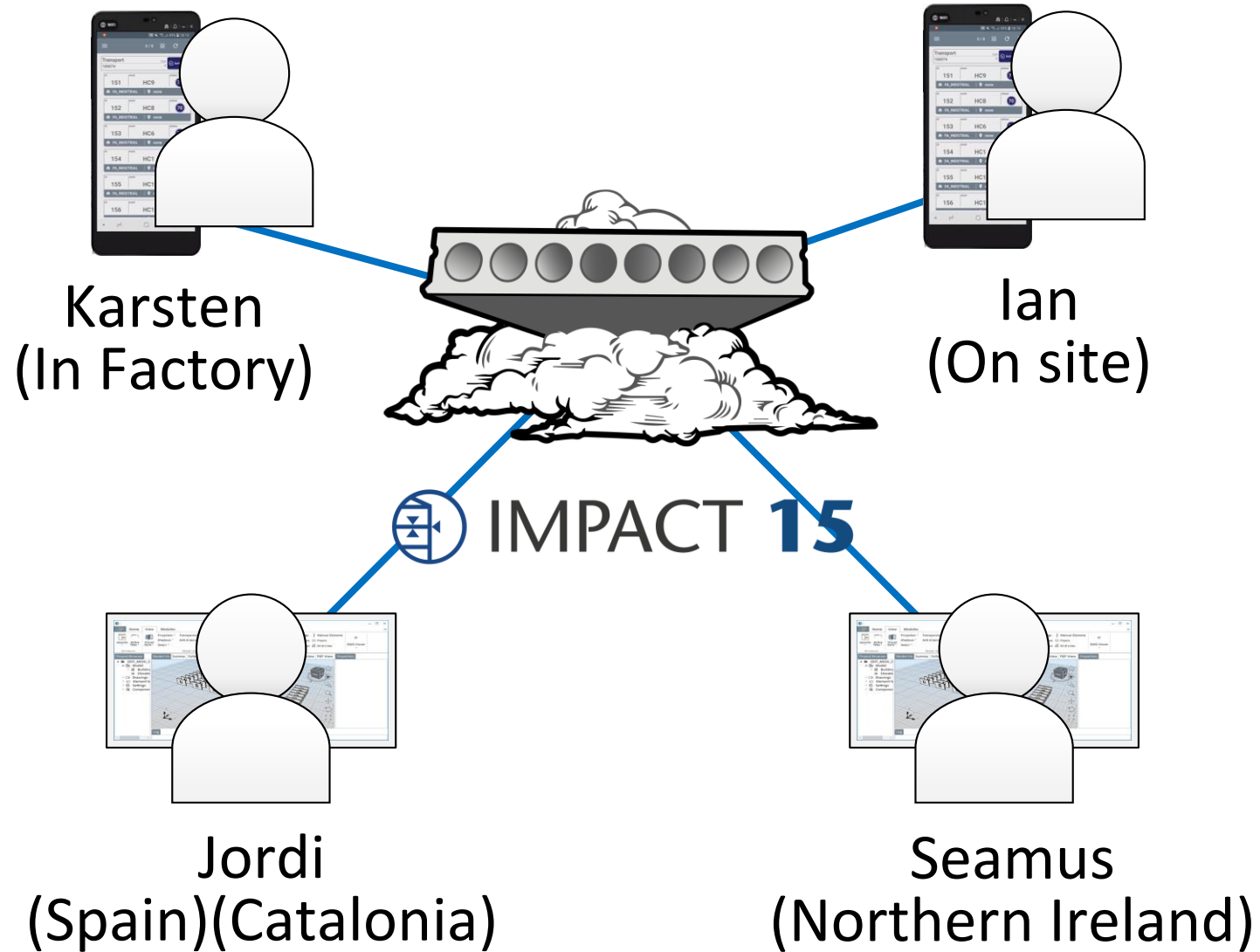
Excel



IMPACT 15



In the Cloud



Users

“We chose IMPACT planning software because it’s so easy to use, the interfaces are very well designed and presented... (we) quickly get on with the work in hand without issues, and complicated procedures.”

“Our Transport-contractor is now able to connect directly and make the transport loads directly from the 3D planning model, this makes coordination much easier between design, production and transport”

“I did not realize how easy to use, and intuitive IMPACT production was before I tried it”



In conclusion

- A unique way of creating 3D models out of pure SQL data
- A very advanced but simple to use user-interface focusing on natural movements – anyone can learn this in just a few hours.
- Database is in the Cloud, which means accessibility from anywhere at any time – Both with mobile phones and computers
- Ability to import data from other software systems
- Complete visibility of all projects, and all Elements at the same time through interfaces relaying the SQL data.

