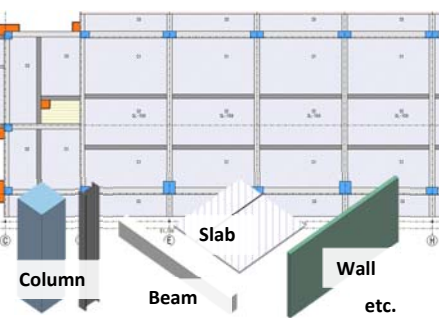


# Structure

## QTO for Structure via Modeling



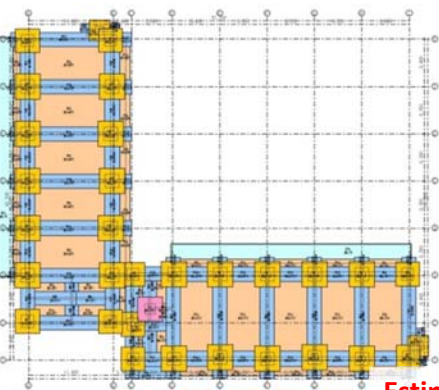
## QTO for Structure via Modeling

- HELIOS
- generates QTO for structure by modeling columns, beams, walls, etc.
  - is compatible with building models of various structural forms.
  - saves users modeling formworks and steel reinforcements.
  - manages information on section sizes and bar arrangements in a list of building elements.
  - automatically carries out QTO for formworks and steel reinforcements on the basis of the models.



List of building elements

## Automatic Calculation of Earth Work, etc.



## Automatic Calculation of Earth Work, etc.

- HELIOS
- automatically calculates quantities of earth work and foundation work on the basis of the models.
  - allows users to check quantities of earthwork (pit excavation, backfill, surplus soil, etc.) using 3D viewer.

**Estimations using HELIOS meet the requirements of the Japanese standard method of measurement as well as those of the standard specifications of MLIT!**

# Estimation

## Cost Estimation Process with Excellent Operability

- HELIOS
- automatically prepares bills of quantities using estimation data.
  - easily transfers data from bills of quantities into itemized costs of construction and those of elements.
  - enables users to edit and set the price of quantities easily.
  - imports XLS/CSV-formatted bills of quantities such as those from equipment dealers.
  - allows users to not only set three types of unit costs but also choose a unit cost from the three as needed.
  - can run price simulations, outputting both the original and changed figures of the calculation results before and after design changes and VE proposal.

品名	単位	数量	単価	金額
コンクリート	m <sup>3</sup>	100	1,000	100,000
鉄筋	kg	500	2,000	1,000,000
型枠	m <sup>2</sup>	200	5,000	1,000,000

## Presentation of a Well-grounded Calculation

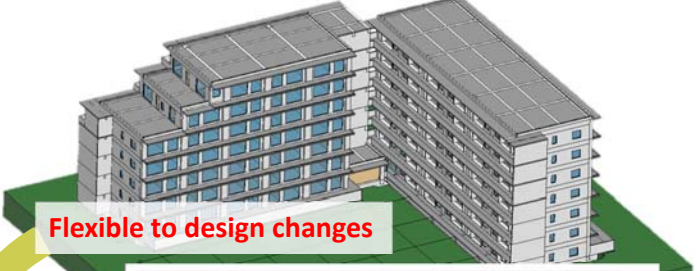
- HELIOS
- allows users to customize calculation sheets based on the output data in the CSV format.
  - clearly shows how a quantity value is derived.

品名	単位	数量	単価	金額	計算式	備考
コンクリート	m <sup>3</sup>	100	1,000	100,000		
鉄筋	kg	500	2,000	1,000,000		
型枠	m <sup>2</sup>	200	5,000	1,000,000		

# Finishes

## QTO for Architectural Finishes via Modeling

- HELIOS
- generates QTO for architectural finishes by modeling partitions, rooms, etc.
  - automatically recognizes openings and matched-to-wall finished beams/columns in the models.
  - assists users to save modeling materials required for finishing tasks.
  - manages finishes in the form of spreadsheets for each room.
  - automatically performs model-based calculation of the internal dimension and quantities of finishes.



Flexible to design changes

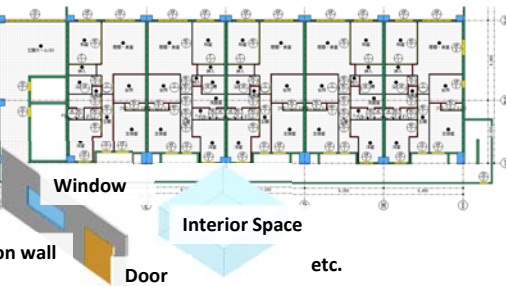
## QTO on a Spreadsheet

- HELIOS
- can also generate QTO on a spreadsheet.
  - allows users to adjust the quantities generated by modeling and digital tracing.
  - enables users to generate QTOs using dedicated spreadsheets for each finish category, such as exterior walls, staircases, etc.

## QTO by Digital Trace

- HELIOS
- calculates the areas and lengths by tracing PDF/DXF drawing data on the PC screen.
  - renders visually-clear information through the use of different colors for each calculated part.

## QTO for Architectural Finishes via Modeling



## QTO by Digital Trace



# Data Interoperability

## Interoperable with Various Systems

- HELIOS achieves data interoperability with IFC files and many other systems.

## Features for Best Collaborations

- HELIOS
- enables users to cooperate on a single quantity surveying project through the use of a network.
  - also delivers good performance for the projects using a single PC.
  - offers the best solution according to the customer's business operation.

