West facade (left) and east facade (right); a game of solid and void within a rational volume yielding a simple but arousing image.

Impression of an office unit covering two floors demonstrating the potential of the designed infrastructure to support a flexible high standard office environment.

Through a high degree of independence between load bearing structure and other components, the design has great transformation capacity and allows densification of program.

North part of Heijplaat: the master plan for the area involves a recreational (green), educational (blue) and businesses area (yellow). The dashed circle indicates the site for the proposed project.

Impression looking from the Waalhaven.

North-east tip of Heijplaat. The site is situated on the right of the figure. The site features panoramic views to the north and east across the Maas and a surprisingly intimate boulevard to the south.

1:200 Ground floor plan; entrance lobby orientated on the RDM-Rotterdam axis. The video on the north-east accommodates an expo featuring views across the Maas.

1:200 8th floor; typical office floor with room for densification of office space. A walkway connecting both cores and the central columns provides access to any plan layout.

1:200 11th floor plan. A glazed roof allows daylight into the atrium on the 11th to 15th floors. A workshop on the 11th is situated at the bottom of this atrium. Cellular offices are positioned adjacent to the facade.

North facade (left) and east facade (right): a game of solid and void within a rational volume yielding a simple but arousing image.

Impression of a potential configuration of the project after several years of transformation and densification.

North-east tip of Heijplaat within the Rotterdam area (blue). The master plan (figure to the right) for the RDM-campus involves the area within the dashed rectangle.

Impression of an office unit covering two floors demonstrating the potential of the designed infrastructure to support a flexible high standard office environment.

Impression looking from the Waalhaven.

Schemes of floor plan layouts with the cores and perimeter as fixed boundary conditions.

Impression of a potential configuration of the project after several years of transformation and densification.

North part of Heijplaat: the master plan for the area involves a recreational (green), educational (blue) and businesses area (yellow). The dashed circle indicates the site for the proposed project.
The infrastructure of the building consists of two decentralised concrete cores providing stability, vertical routing and service shafts. Steel members on a 3600*3600*3400mm grid enable the placement of floors anywhere in the volume.

The facade is composed of two types of elements: timber frame elements for the closed parts and a glazed facade based on horticultural greenhouse systems for the open parts.

Floors are placed anywhere in the steel grid to meet demand; it is possible to add extra floor slabs when space demand grows.

Floors that are added at a later stage utilise a metal web frame. This lightweight floor type can be connected to the slimline floor thanks to the large voids between the metal webs. PCM carrying panels are installed on the ceiling to provide the same thermal mass as the steel concrete floors.

A hollow steel-concrete floor is used for parts of the building that are built at initial construction. The steel members are perforated to allow for the integration of service ducts etc. within the floor package. The concrete slab of the floor is thermally activated for it to function as a cooling ceiling.

Floors that are added at a later stage utilise a metal web frame. This lightweight floor type can be connected to the slimline floor thanks to the large voids between the metal webs. PCM carrying panels are installed on the ceiling to provide the same thermal mass as the steel concrete floors.

A hollow steel-concrete floor is used for parts of the building that are built at initial construction. The steel members are perforated to allow for the integration of service ducts etc. within the floor package. The concrete slab of the floor is thermally activated for it to function as a cooling ceiling.

An important aspect concerning the materialisation of the building is the independancy between building components, especially those with different life cycles. Structure, skin, services, partitions etc were all designed to allow for independent disassembly (figure by S. Brand).

The concrete cores are connected with an outrigger at the tenth floor. This outrigger forms a rigid connection between the cores to reduce the deflection at the top of the building and horizontal moments at the bottom of the cores due to wind loads. By utilising an outrigger, the deflection under wind loads is reduced by 50%, enabling very slender cores that do not obstruct the steel grid.

The concrete slabs of the steel-concrete floors are thermally activated and function as cooling ceilings. Air ducts within the floor passage provide for ventilation.

Hollow steel-concrete floors are used for parts of the building that are built at initial construction. The steel members are perforated to allow for the integration of service ducts etc. within the floor package. The concrete slab of the floor is thermally activated for it to function as a cooling ceiling.

The concrete cores are connected with an outrigger at the tenth floor. This outrigger forms a rigid connection between the cores to reduce the deflection at the top of the building and horizontal moments at the bottom of the cores due to wind loads. By utilising an outrigger, the deflection under wind loads is reduced by 50%, enabling very slender cores that do not obstruct the steel grid.

The concrete slabs of the steel-concrete floors are thermally activated and function as cooling ceilings. Air ducts within the floor passage provide for ventilation.

1:20 Horizontal sections through the facade. All elements can be assembled and disassembled independently, allowing open parts to become closed and vice versa.

The facade is composed of two types of elements: timber frame elements for the closed parts and a glazed facade based on horticultural greenhouse systems for the open parts.

The timber frame facade elements are clad with fibre-cement cladding panels. The cladding can be replaced independently of the timber-frame elements.

The timber frame facade elements are clad with fibre-cement cladding panels. The cladding can be replaced independently of the timber-frame elements.

The timber frame facade elements are clad with fibre-cement cladding panels. The cladding can be replaced independently of the timber-frame elements.

A hollow steel-concrete floor is used for parts of the building that are built at initial construction. The steel members are perforated to allow for the integration of service ducts etc. within the floor package. The concrete slab of the floor is thermally activated for it to function as a cooling ceiling.

The concrete cores are connected with an outrigger at the tenth floor. This outrigger forms a rigid connection between the cores to reduce the deflection at the top of the building and horizontal moments at the bottom of the cores due to wind loads. By utilising an outrigger, the deflection under wind loads is reduced by 50%, enabling very slender cores that do not obstruct the steel grid.

The concrete slabs of the steel-concrete floors are thermally activated and function as cooling ceilings. Air ducts within the floor passage provide for ventilation.

The concrete cores are connected with an outrigger at the tenth floor. This outrigger forms a rigid connection between the cores to reduce the deflection at the top of the building and horizontal moments at the bottom of the cores due to wind loads. By utilising an outrigger, the deflection under wind loads is reduced by 50%, enabling very slender cores that do not obstruct the steel grid.

The concrete slabs of the steel-concrete floors are thermally activated and function as cooling ceilings. Air ducts within the floor passage provide for ventilation.

The concrete cores are connected with an outrigger at the tenth floor. This outrigger forms a rigid connection between the cores to reduce the deflection at the top of the building and horizontal moments at the bottom of the cores due to wind loads. By utilising an outrigger, the deflection under wind loads is reduced by 50%, enabling very slender cores that do not obstruct the steel grid.

The concrete cores are connected with an outrigger at the tenth floor. This outrigger forms a rigid connection between the cores to reduce the deflection at the top of the building and horizontal moments at the bottom of the cores due to wind loads. By utilising an outrigger, the deflection under wind loads is reduced by 50%, enabling very slender cores that do not obstruct the steel grid.

The concrete cores are connected with an outrigger at the tenth floor. This outrigger forms a rigid connection between the cores to reduce the deflection at the top of the building and horizontal moments at the bottom of the cores due to wind loads. By utilising an outrigger, the deflection under wind loads is reduced by 50%, enabling very slender cores that do not obstruct the steel grid.

The concrete cores are connected with an outrigger at the tenth floor. This outrigger forms a rigid connection between the cores to reduce the deflection at the top of the building and horizontal moments at the bottom of the cores due to wind loads. By utilising an outrigger, the deflection under wind loads is reduced by 50%, enabling very slender cores that do not obstruct the steel grid.

The concrete cores are connected with an outrigger at the tenth floor. This outrigger forms a rigid connection between the cores to reduce the deflection at the top of the building and horizontal moments at the bottom of the cores due to wind loads. By utilising an outrigger, the deflection under wind loads is reduced by 50%, enabling very slender cores that do not obstruct the steel grid.

The concrete cores are connected with an outrigger at the tenth floor. This outrigger forms a rigid connection between the cores to reduce the deflection at the top of the building and horizontal moments at the bottom of the cores due to wind loads. By utilising an outrigger, the deflection under wind loads is reduced by 50%, enabling very slender cores that do not obstruct the steel grid.

The concrete cores are connected with an outrigger at the tenth floor. This outrigger forms a rigid connection between the cores to reduce the deflection at the top of the building and horizontal moments at the bottom of the cores due to wind loads. By utilising an outrigger, the deflection under wind loads is reduced by 50%, enabling very slender cores that do not obstruct the steel grid.

The concrete cores are connected with an outrigger at the tenth floor. This outrigger forms a rigid connection between the cores to reduce the deflection at the top of the building and horizontal moments at the bottom of the cores due to wind loads. By utilising an outrigger, the deflection under wind loads is reduced by 50%, enabling very slender cores that do not obstruct the steel grid.

The concrete cores are connected with an outrigger at the tenth floor. This outrigger forms a rigid connection between the cores to reduce the deflection at the top of the building and horizontal moments at the bottom of the cores due to wind loads. By utilising an outrigger, the deflection under wind loads is reduced by 50%, enabling very slender cores that do not obstruct the steel grid.

The concrete cores are connected with an outrigger at the tenth floor. This outrigger forms a rigid connection between the cores to reduce the deflection at the top of the building and horizontal moments at the bottom of the cores due to wind loads. By utilising an outrigger, the deflection under wind loads is reduced by 50%, enabling very slender cores that do not obstruct the steel grid.

The concrete cores are connected with an outrigger at the tenth floor. This outrigger forms a rigid connection between the cores to reduce the deflection at the top of the building and horizontal moments at the bottom of the cores due to wind loads. By utilising an outrigger, the deflection under wind loads is reduced by 50%, enabling very slender cores that do not obstruct the steel grid.

The concrete cores are connected with an outrigger at the tenth floor. This outrigger forms a rigid connection between the cores to reduce the deflection at the top of the building and horizontal moments at the bottom of the cores due to wind loads. By utilising an outrigger, the deflection under wind loads is reduced by 50%, enabling very slender cores that do not obstruct the steel grid.

The concrete cores are connected with an outrigger at the tenth floor. This outrigger forms a rigid connection between the cores to reduce the deflection at the top of the building and horizontal moments at the bottom of the cores due to wind loads. By utilising an outrigger, the deflection under wind loads is reduced by 50%, enabling very slender cores that do not obstruct the steel grid.

The concrete cores are connected with an outrigger at the tenth floor. This outrigger forms a rigid connection between the cores to reduce the deflection at the top of the building and horizontal moments at the bottom of the cores due to wind loads. By utilising an outrigger, the deflection under wind loads is reduced by 50%, enabling very slender cores that do not obstruct the steel grid.