### Project Reference in the Field of  
**Project Management**

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### PHAENO SCIENCE CENTER WOLFSBURG  
**GERMANY**

<table>
<thead>
<tr>
<th>Client</th>
<th>City of Wolfsburg, Neuland Wohnungsbaugesellschaft mbH</th>
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</thead>
<tbody>
<tr>
<td>Financing</td>
<td>City of Wolfsburg, Neuland Wohnungsbaugesellschaft mbH</td>
</tr>
<tr>
<td>Duration of Services</td>
<td>2002-2005</td>
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<tr>
<td>Cost of Implementation</td>
<td>50.7 Mio. Euro</td>
</tr>
</tbody>
</table>

**Scope of Services**
- Management and co-ordination of project, incl.
  - Co-ordination and documentation of planning during construction
  - Cost- and time control
  - Management of construction and installation schedule
  - Preparation and direction of planning and steering meetings
  - Assistance in approval applications
  - Drafting of final decision documents
  - Approvals / acceptance and project documentation
  - Schedule control
  - Contract management
  - Variations management
Brief Project Description

PHAENO will house an extraordinary knowledge event, a fantastic paradise for curious and innovative people. In its dynamic and architectonically unprecedented space sculpture visitors of all ages and from all over have opportunity to discover the unique secrets of nature and technique. At completion time it is Germany’s largest playing ground for ambitious innovations a pretension which also reflects in the spectacular and breathtaking design of its London architect, Mr. Zaha Hadid.

With its main exhibition hall floating 7 metres above the ground, free access is permitted to the underlaying walking and event zone. Here you access ten huge cones, they carry the hall, home shops, restaurants and the entrance. Fife of the cones take up to the top of the hall to support its roof. The entire building is swaddled by a diversity of facade elements of pre-constructed concrete, in-situ concrete, glass and metal. The Vierendeel principles for steel structures govern the design of the roofing with its trapezoidal profiled steel sheets as outer cover.

The avant-gardistic architecture requires self-compacting concrete (SCC) for most structural works. Regarding this material Phaeno presently forms Europe's biggest construction site where the demands on fair-faced concrete elements are extraordinary also.

The CES branch firm Wolfsburg Consult GmbH has been entitled to manage and steer the construction of PHAENO.

Key figures

- Size of construction area 17,900 m²
- Gross story area 11,295 m²
  Without underground car park
- Gross tonnage 81,500 m³
  Without underground car park
- External dimensions 154 x 130 x 97 m
- Allocated areas
  Performance centres 6,000 m²
  Science theatre 560 m²
- Estimated visitors 260,000 per year
- Exponates approx. 250