

COMPANY PROFILE

Northhein is a company that provides integrated solutions for Infrastructure, Energy, BIM AEC, Sustainability, and Real Estate fields. We are a civil engineering and construction firm, committed to work with public and private clients, government, and communities to fulfil their construction, design, and civil engineering needs. Our main goal is to embrace and ensure clients satisfaction for all their projects, these being within the fields of housing, residential, commercial, public facilities, infrastructures, industrial, utilities, rural development, water management and supply, sanitation, landscape, and energy.

We blend the use of the latest technology with engineering expertise and experience to provide robust, cost effective engineering, design, construction, and management solutions. Our approach is to be communicative, collaborative and proactive, reaching beyond boundaries of contractual obligation where necessary, to help each project we are involved with to be a success.

CORE COMPETENCIES AND FIELDS SERVED

INFRASTRUCTURES

Roads and highways

Northhein provides design-build and project management expertise and optimizes commercial structures to fund transportation projects in the U.S. and internationally. Northhein forms delivery teams with complementary skills and synergies to provide innovative and cost-effective solutions to transportation projects.

Railways

We develop cutting-edge projects, clean and efficient transport systems, using the most innovative technologies and resilient solutions, which solve the challenges of changing environments, always taking into account passenger comfort, the highest standards of accessibility and the sustainability of the environment.

Ports and marine terminal facilities

We take care of all aspects of engineering and design of terminal facilities including ocean, marine and naval architecture elements of marine terminals. Ocean and civil engineering work includes roadway design, beach protection, slope stability, liquefaction design, evaluation of littoral processes and evaluation of dredging requirements and techniques.



CORE COMPETENCIES AND FIELDS SERVED

INFRASTRUCTURES

Coastal engineering

Northhein's coastal engineering team is fully dedicated to the development of coastal hydraulics, hydrology, water resources, environment and oceanography projects. Our services provide comprehensive support for all phases of marine and port projects.

Bridges

We deliver new and replacement of bridge projects to state departments of transportation, regional transportation authorities, municipalities and local communities. This experience with the transportation sector includes project development, program management, EPC, turnkey design-construction, operations, and maintenance.

Water

Northhein offers its high standard capabilities for the development of water related projects supporting public and private entities in the development of master plans, basin plans, feasibility studies, public-private participation schemes, construction and operation of water infrastructures and facilities.

Water supply

Water sources can include lakes and rivers, surface water collection and storage, groundwater well fields, aquifer storage and recovery systems, water reuse systems, seawater and brackish water desalination systems, and the acquisition and conveyance of water from other suppliers. We work with you to create an effective water supply strategy to meet your every need.

Watershed management

A multidisciplinary approach is necessary for proper planning and management of watersheds. We help you to understand the various characteristics of watersheds and design a plan to manage the water supply, water quality, drainage, stormwater runoff, water rights, and overall utilization of watersheds.

Dams and Canals

We provide services in a number of areas including construction of dams, canals, micro irrigation and tunnelling. We gather capabilities for the construction of large dams in the water supply and irrigation sector including constructing diversion tunnels, intake and associated civil works such as powerhouse, power tunnels, power intake and spillways. Additionally, we design and execute canals, lift irrigation and micro irrigation schemes for bulk water transmission.



CORE COMPETENCIES AND FIELDS SERVED

BIM AEC

BIM Design, advanced design tools and processes

Using the most advanced design software and BIM process technologies, we find innovative ways to unlock added value. This includes data-centric 3D-design systems, parametric 3D-component-design software, finite element analysis, computational fluid dynamics, and various types of developed simulation software.

Our multidisciplinary engineering team work seamlessly with our procurement, construction, and commissioning team to achieve optimal overall project outcomes. Incorporating a global approach to your projects, we aren't constrained by borders or time. We mobilize experts from around the world to deliver you the best.

Construction Management

- Planning, scheduling, sequency
- Facilities management and maintenance
- Budget development
- Logistic evaluation
- Constructability review
- BIM-based clash-detection
- Contracts management, cost control
- On-site construction supervision
- Permitting, bonding and insurance
- Trade contractors
- Equipment procurement

Civil Engineering

- Master planning and design
- Highways and junctions
- External works
- Road pavements
- Bridges and ancillary structures
- Earthworks and ground modelling
- Site design and construction
- BIM Infrastructure design
- Construction management and execution
- Contract management
- Field supervision and inspection

Architectural BIM services

Include creating building information models from sketches, CAD drawings, documentation in BIM, analysis, clash detection and content creation. We work with our clients through the design process from schematic design to design development and construction documentation, and are responsible for complete BIM modeling.

Northhein has been fulfilling the project requirements of construction companies with standard and customized solutions regardless of whether the projects are retail, industrial, residential, educational or health care.

BIM AEC Design services

- BIM Architectural design, detailing
- BIM Structural design, detailing

BIM MEP

- BIM Mechanical
- BIM Electrical



CORE COMPETENCIES AND FIELDS SERVED

BIM AEC

BIM AEC Design services

BIM Infrastructures Design

Structural steel structure modeling

Landscape Modelling

Structural Revit 3D Modeling

As-Built Drawings

Revit 3D Modeling

Site Modeling

Quantification

Construction Documentation

BIM Implementation

BIM Documentation

BIM Execution Plan

BIM Coordination and Integration

Structural Drafting and Detailing

Schematic Design Documentation

Design Development Documentation

As-Built modeling and drawings

Clash detection services with MEP

BIM for Infrastructures: from planning and design to the maintenance phase

Building an information model (BIM) starts at the planning and conceptual design stage and continues throughout the lifecycle of the asset. It is important that intelligent information is not lost as the project progresses through the various stages of a BIM Infrastructure project.

Building Information Modeling (BIM) is a powerful methodology that has been implemented with great success in the domain of architecture, engineering, and construction (AEC). The construction industry has been working intensively on the implementation of the BIM methodology over recent years. BIM is a collaborative work concept, strongly based on technological advances in computation. BIM tools enable the development of building projects during their lifecycle, including the design, construction, maintenance, management, and demolition phases. BIM implementation in recent years has been an essential asset to project development, its inclusion in the transport infrastructure sector (roads, railways, bridges, tunnels, airports, and ports) is perhaps the largest beneficiary of this managed modeling approach, given the state and quality of transportation infrastructure. There is a growing interest in the applicability of BIM to the transport infrastructure sector (I-BIM). Also, in the Operation and Maintenance (O&M) phase of existing infrastructures, different systems are frequently available to manage building maintenance data. It has been realized through research and practice that BIM construction has significant synergies and can bring benefits if implemented together.

We actively help customers to enhance overall project efficiency and margin by achieving complete coordination among all designers, consultants and contractors through integration of all project data in a single digital model.



CORE COMPETENCIES AND FIELDS SERVED

ENERGY

At **Northhein**, we are at the forefront for the development of the world's most demanding projects in many technologies such as photovoltaic, CSP, wind (onshore and offshore), hydrogen, geothermal, hydropower, distributed generation, smart grids, waste to energy and marine energy; incorporating hybrid solutions and energy storage systems.

Our services cover the entire life cycle of energy assets, from the laying of power lines and construction of renewable generation plants to their operation and maintenance. We strive to be a global partner for our clients and to this end we implement technology to maximize the process efficiency in every country where our clients operate.

Wind energy projects design
Wind energy projects development
Wind energy projects construction
Solar energy project, design and EPC

Hydropower projects development
Hydropower projects design and EPC
Pumped storage hydro
Off-grid hybrid power solutions

Energy resource assessments and site selection

Resource assessment is critical for the development of a successful wind or solar power project. The detailed evaluation of the wind regime or solar irradiation at a power project site enables accurate energy yields to be predicted and financial projections to be made.

Design, engineering, procurement, and construction management

Successful project delivery depends on strict schedule oversight, tight scope management, effective project controls, and smart design options. We're experienced at putting all the pieces together in the right sequence, combining them to maximize quality and reduce risks and life cycle costs.

We focus to deliver our clients:

Integral end-to-end solutions
EPC projects
Maintenance services
Distributed energy
Generation initiatives
Power lines infrastructure
Substations

An international benchmark partner for our clients.

Digital transformation solutions
Field and resource assessment



DIFFERENTIATORS

Customer Focus

We aim to understand your business and projects so we can tailor our services to suit your particular needs. We then proactively assist your team to deliver your projects. We care so much about our customers and the projects we are involved with we have been known to step beyond our contractual obligations to ensure the successful delivery of project.

Communication

We understand that the key to success is good communication between project team members, stakeholders and external parties. We actively engage with all the project team to drive forward the technical and commercial success of our client's projects.

Value and Cost-Effectiveness

We adopt a rigorous commercial approach to the engineering design process, and actively encourage value engineering processes within the project team. Our aim is for the current project to be more cost-effective than the last, whilst still maintaining the serviceability, functionality and quality required by the client and end user.

BIM and Technology

We are early adopters of BIM methodology, and have established a reputation for a leading edge application of technology to engineering design, but always tempered with experience, wisdom and common sense. Our aim is to deliver increasingly efficient designs to the most satisfied clients.

CORPORATE DATA

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