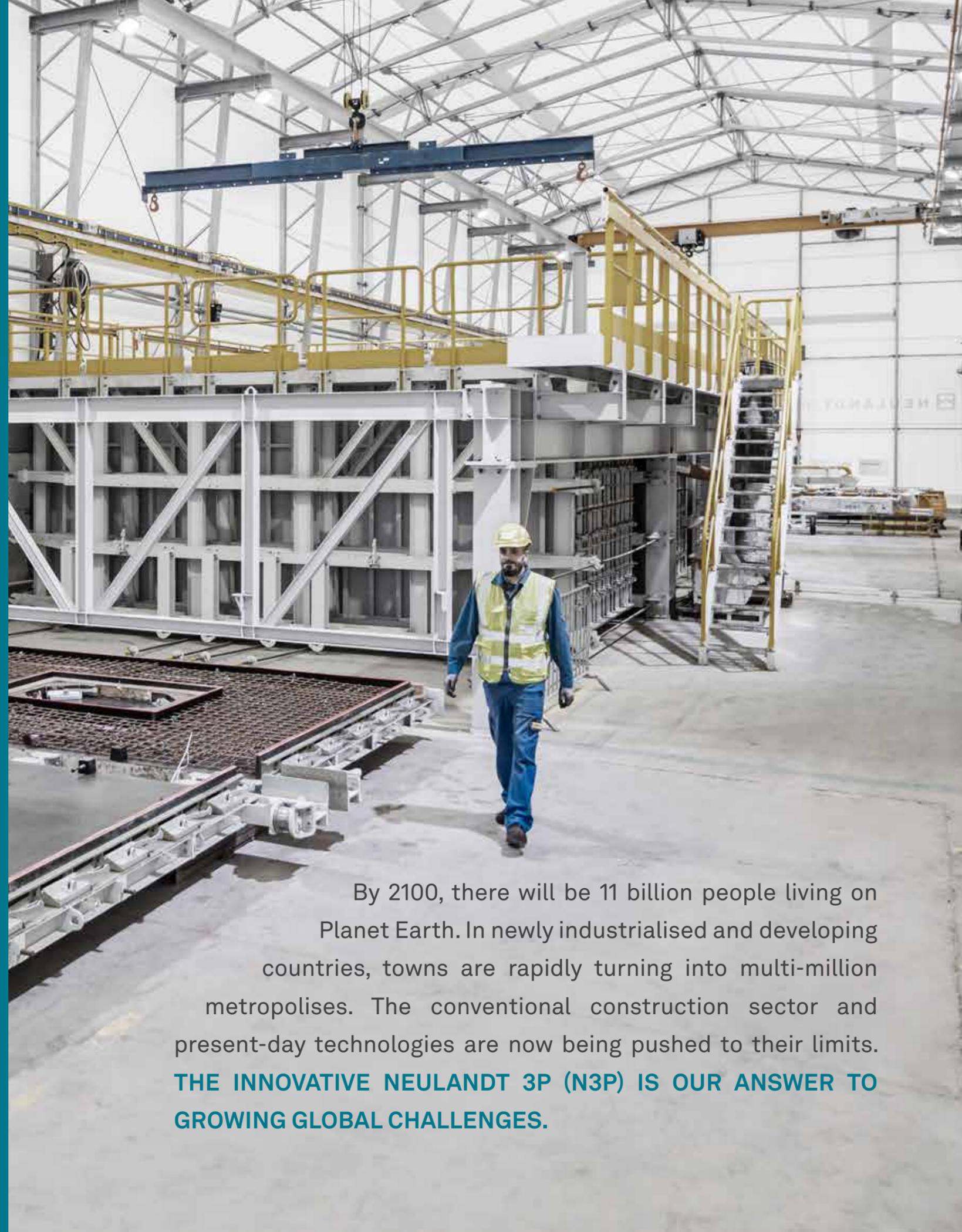




The Portable Precast Plant (N3P)

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By 2100, there will be 11 billion people living on Planet Earth. In newly industrialised and developing countries, towns are rapidly turning into multi-million metropolises. The conventional construction sector and present-day technologies are now being pushed to their limits. **THE INNOVATIVE NEULANDT 3P (N3P) IS OUR ANSWER TO GROWING GLOBAL CHALLENGES.**

Recognising tomorrow's challenges today

The NEULANDT portable precast plant (N3P) brings you sustainable solutions to overcome the unique challenges of the future. It has been designed for the economic manufacturing of precast concrete elements at the actual construction site, ensuring the highest levels of productivity and structural quality.

Infrastructure

Hospitals, car parks, noise protection walls, school buildings, etc.



Commercial

Office buildings, supermarkets, etc.



Residential

Apartment buildings, villas and townhouses with one or more floors, etc.



The innovative NEULANDT 3P (N3P) is our answer to growing global challenges

BUILD EVERYWHERE

The N3P is a **solution** that enables precast concrete elements to be produced both economically and industrially, transforming land into spaces with social, economic and ecological added value.

N3P – THE PORTABLE PRECAST PLANT

Construction sites and production facilities are merging into one. The high-performance N3P **increases** the need for **local manpower** and **minimises transport requirements**. The plant consistently delivers the highest level of structural quality from the beginning of the project until the end. Once the construction of buildings is complete on the one project site, the N3P can simply be dismantled and relocated to the next construction site.

The key to maximum productivity and optimised work processes lies in the innovative, patented **butterfly technology**. Our solution combines the advantages of horizontal works preparation and vertical pouring.

MAXIMUM OUTPUT ACHIEVED WITHIN A MATTER OF WEEKS

After 4 – 6 weeks of assembly, the 70-metre long and 15-metre wide N3P is 100% operational for the industrial manufacturing of precast concrete elements. Depending on the shift model, the plant's productivity can achieve an output of up to 300,000 m² precast elements per year.

SECURING LOCAL VALUE-ADDED FOR THE FUTURE

The N3P reinforces a company's status as a strong, innovate player. Economic cycles remain within the region thanks to short transport distances and the use of local manpower and domestic resources. This establishes a network of regional stakeholders, leading to logistical benefits and competitive advantages.

Around 20 labourers per shift are needed to operate the plant. With operations split into three shifts, this equates to roughly 60 production workers. Approximately 24 labourers are required for assembly of the shell. The N3P has a catalytic effect on the whole industry. The plant generates jobs indirectly, requiring the services of local craftsmen such as plumbers, electricians, roofers, tilers and painters.



Reduction in construction time



Reduction in structural shell construction costs



High-quality buildings



Less CO₂ emissions

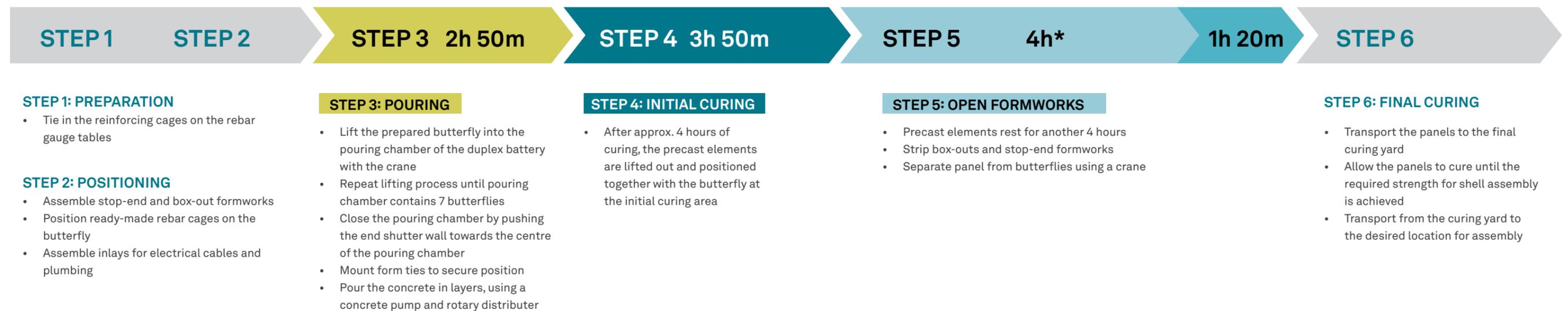
The N3P process

TECHNOLOGY WITH THE POWER TO TRANSFORM

The core of the N3P system – the innovative butterfly technology – is found inside the portable precast plant. The high-performance battery is equipped with removable, folding and double-sided steel butterfly formworks. A butterfly formwork comprises two formwork panels that are held together by a hinged joint.

The N3P has been designed with top performance and maximum productivity in mind. Our solution combines the advantages of preparing the elements in a flat position and pouring the concrete into vertical formworks.

Butterfly is returned to the second working station where it will be prepared for the next casting.



*) While precast elements cure in one compartment of the duplex battery, the process continues as described in the second compartment

RESULTS

This method produces precast concrete elements of consistently high quality because production doesn't depend on weather conditions. The construction of structural shells is significantly more efficient and economic due to the formworks producing precast elements (walls and slabs) with five smooth sides.

Ensuring focus on time, costs & quality

The N3P is setting new benchmarks in the precast industry in terms of quality, as well as both time and cost savings.

 Cost	 Time	 Quality
Reduction in waste due to the precise planning of resources	Reduction of construction time due to the use of precast technology	Increased life span of the building
Reduction in material consumption	Increased productivity due to a combination of horizontal preparation and vertical pouring	Resistant to fire, mould and fungi
Reduction of transport costs due to plant being on site	Reduced transport needs due to both – construction and production sites	Consistent quality because production independent of weather conditions
Maximum efficiency, minimum space requirements	Time savings due to dry construction sites, unaffected by weather	Precast elements are of excellent quality and smooth on all sides (except side where filled)
Fast construction minimises contractor's interest charges on investment capital. Quicker ROI		MEP integration

From concept to creation

NEULANDTengine and NEULANDTcalc elevate the N3P to the peak of productivity. This unique software optimises production processes for the specific needs of each construction project to ensure maximum efficiency over the long-term.

NEULANDTengine	NEULANDTcalc
Maximum efficiency of the N3P due to optimised segmentation & production process planning of the desired development	Cost simulation software for the precise calculation of the customer's construction plans

The N3P has been designed to be constructed and operated on the project site. The N3P takes up no more space than 2 – 3 hectares and comprises the following areas:

- 1 NEULANDT 3P
- 5 Houses under construction
- 2 Storage area for curing the precast concrete elements
- 6 Completed houses
- 3 Container for tools and spare parts
- 7 Occupied houses
- 4 Concrete mixing station & raw materials storage



Take a look at N3P VR tour:



Global flexibility

- The site plant can be used anywhere in the world due to its portability
- Both assembly and dismantling of the plant are completed in just 4 to 6 weeks
- Tried-and-trusted transport solution ensures the quick and efficient unloading of standard containers (40 ft)

A 'plug & play' plant

- 1 duplex battery with 14 + 7 butterfly formworks
- 12 partition walls
- Integrated technical infrastructure for electricity and water connections
- Two integrated 12.5-tonne cranes
- Waterproof tent 70 x 15.1 x 12.6 metres
- Rotary distributor

Local added value

- Employment and training of local workforce to enable operation of the N3P with maximum productivity levels
- Local procurement, management and transport of materials

Maximum productivity & profitability

- Efficient, high-yield production process (up to 300,000 m² elements/year)
- Production is not weather-dependent
- Shell construction costs reduced by between 9% and 40%
- Construction time shortened by between 60% and 80%

Technical support

- **Engineering**
 - Design of box-outs & stop-ends
 - Design of rebar gauge tables
 - Advice on technical aspects, based on locally available materials
 - Support with building design
- **Operations**
 - Assembly and dismantling of the N3P
 - Training of the local team during the start-up phase
 - Implementation of a 3-shift system

We need to act today if we want to shape a better future!

Since NEULANDT GmbH was founded in 2019, we have specialised in the active development of future-oriented construction solutions. N3P – the portable high-performance plant for the industrial production of precast concrete elements is our solution for overcoming the challenges that are faced the world over. Driven by passion and expertise, we are setting new benchmarks and transforming tomorrow's living spaces for hundreds of people.

As part of the global Umdasch Group, we not only have the backing of a strong group of companies, but also build on 150 years of experience and specialist knowledge in the construction and retail sectors. The Umdasch Group is the holding company of three successful companies: Doka, Umdasch Group Ventures and umdasch The Store Makers. NEULANDT GmbH is a subsidiary of Umdasch Group Ventures, which is specialised in state-of-the-art technologies and business models in the construction and retail industries.

Facts and figures
AT A GLANCE





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