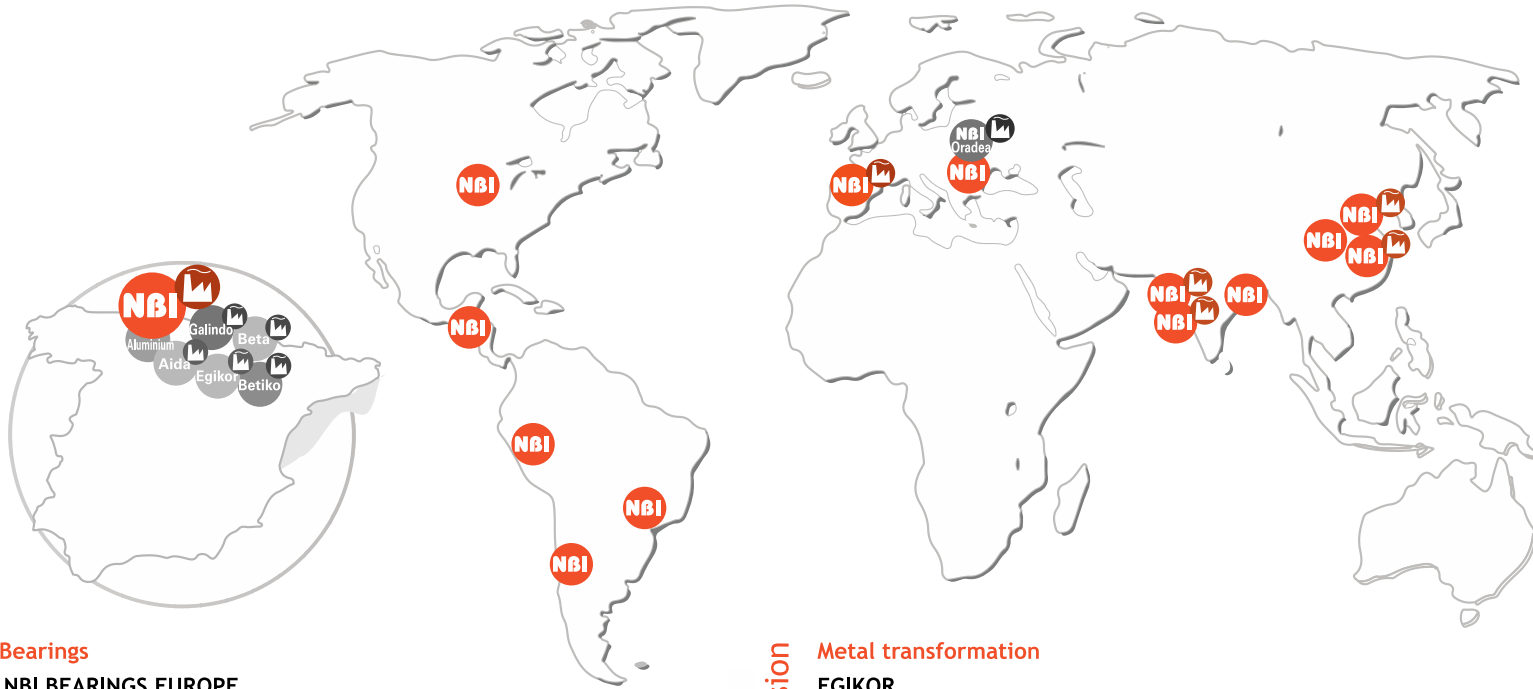


NBI industrial Oradea



Bearings - Metal transformation - Precision machining - Aluminium injection



■ Bearings division

Bearings

NBI BEARINGS EUROPE

NBI headquarter, R&D, designing, manufacturing plant, warehouse and sales office in Oquendo (Spain).

NBI BEARINGS ROMANIA

Application engineering and sales office in Bucharest (Romania).

LOCAL SALES SUPPORT

in Brazil, Mexico, Chile, Peru, USA.

NBI INDIA

Manufacturing plant and warehouse in Ahmedabad and sales office in Kolkata (India).

RNB COMPONENTS

Manufacturing plant of bearings steel cages and other auxiliary components in Rajkot (India).

CRONOS

Manufacturing plant warehouse and sales office in Wujin (China). Strategic partnership.

WAFANDIANG SQA

Laboratories in Wafandiáng (China).

JERRY BEARINGS TRANSMISSION TECHNOLOGY

Roller manufacturing plant in Zhejiang (China). Strategic partnership.

■ Industrial division

Metal transformation

EGIKOR

Technical office and metal stamping plant in Ermua (Spain).

AIDA INGENIERÍA

Technical office and boiler-making plant in Artea (Spain).

INDUSTRIAS BETA

Technical office and metal stamping plant in Elorrio (Spain)

Precision machining

INDUSTRIAS BETIKO

Technical office and multi-spindle machining plant in Bergara (Spain).

INDUSTRIAS METALÚRGICAS GALINDO

Technical office and precision machining plant in Mungia (Spain).

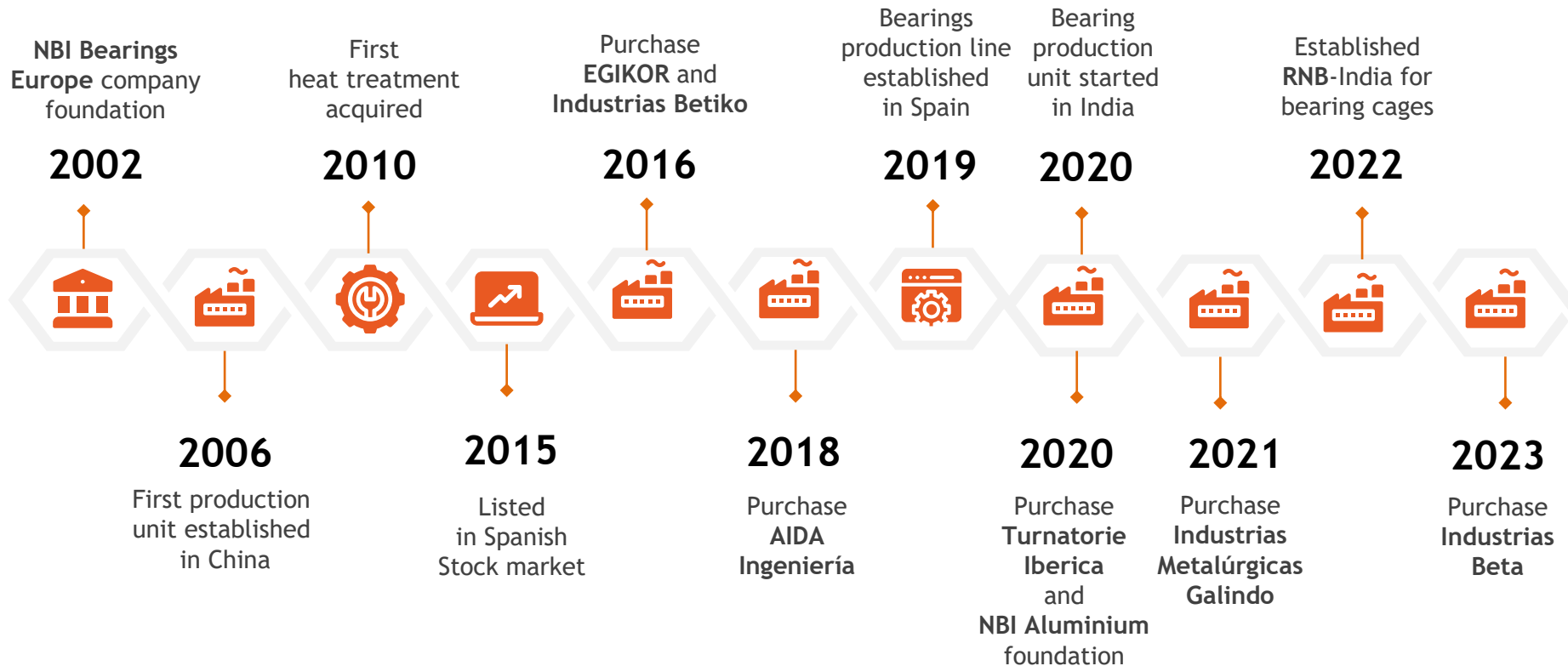
Aluminium injection

NBI INDUSTRIAL ORADEA

Technical office and aluminium components' plant (HPDC) in Oradea (Romania).

NBI ALUMINIUM

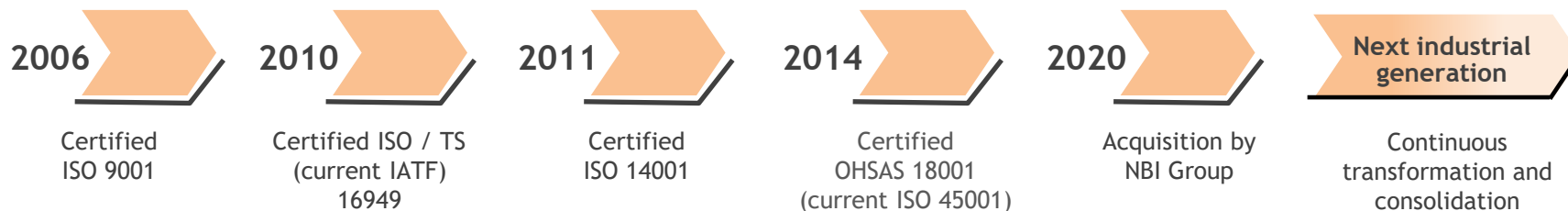
Technical and sales office of aluminium injection and machining in Oquendo (Spain).



“We aim to grow together with our costumers, committed to deliver high quality HPDC parts and providing continuous support”

- ✓ **Customer focused** processes. New products development plan according to customer timing
- ✓ **Financial strength** to follow our customers in new growth projects, products and locations
- ✓ **Plant and business teams** prepared for new projects
- ✓ **Flexibility** and quick reaction to unexpected situations. Contingency, corrective actions and lessons learned methodology
- ✓ **Capacity** installed to absorb unexpected capacity requirements
- ✓ Open to supply to other locations of our customer facilities
- ✓ **New technologies** and processes installed to reduce and simplify the logistic chain
- ✓ Committed to maintain **competitive costs**: OEE monitoring & improvement, state of the art and automated processes

Chronology



Facilities

NBI Industrial Oradea - Casting



NBI Industrial Oradea - Machining



2022 Turnover

15,0 M€

2022 AI Consumption:

2.000 tn

Employees

132

35

Total area

9.000 m²

5.000 m²

Current portfolio ⇒ 85% Automotive / 15% Others

Additional operations inhouse ⇒ Machining / Threading / Drilling / Shot Blasting / Heat treatment / Tumbling

Most common alloys DIN EN: EN AC-46000, EN AC-44300, EN AC-43400 , EN AC-43500, EN AC-43000 , EN AC-47100, EN AC-44100

CapEx execution plan:

- Executed 2021-2022: 6.4 M€
- Phase 1 2023-2025: 8.9 M€
- Phase 2 2025-2027: 11.9 M€
- Total CapEx: 27.2 M€
- Max production capacity: 68.0 M€

Section	CapEx executed 2022	Installed capacity 2023	CapEx planned 2025	Capacity 2025	CapEx Planned 2027	Max capacity 2027
Die casting	4,5	26,2	6,6	45,5	6,1	60,0
Machining	0,3	0,8	1,1	2,0	1,3	4,5
Paint	0,0	0,0	0,6	2,5	0,0	3,5
Land & infrastructure	1,6		0,7		4,5	
Total	6,4	27,0	8,9	50,0	11,9	68,0

Values in million euro

NBIO - 1

Melting

5 furnaces
(2x 800kg / 2x 1.500kg / 1x 2.000kg)

Casting

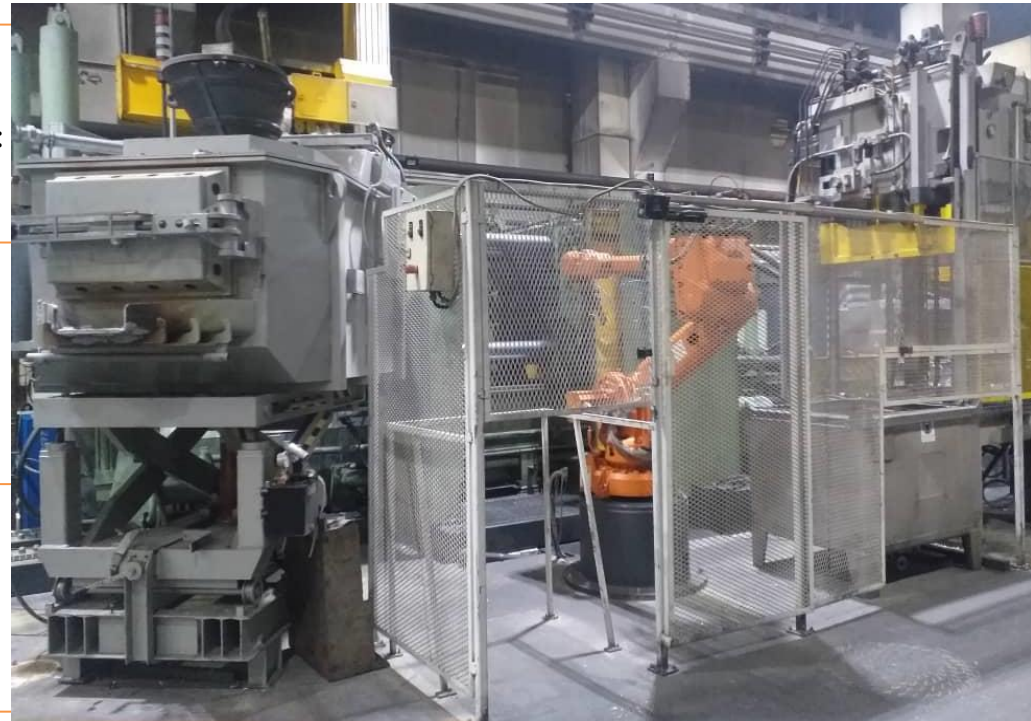
21 die casting cells (from 400 to 950 tn):
IDRA, STP, Oleopress, Buhler

Trimming

Automatic & manual integrated
in casting cell

Tumbling

Vibrators and ceramic stones
(2x linear full automatic / 1x circular)



NBIO - 2



18 machining cells

- Spinner CNC lathe automatic loading
- Special transfer machines
- Makino double pallet CNC horizontal machining center
- Takisawa horizontal gantry twin spindle lathe
- Hyundai vertical machining center
- Chiron vertical machining center



- Multi heads drilling machines
- Threading machines
- 2 Polishing stations
- 2 Shot blasting machines
- T4-T5 Heat treatment furnaces



QUALITY



- GOM
- 3D CMM measuring machines (3x)
- 2 spark emission spectrometer
- 2 x-ray porosity control machines
- Hardness control
- SPC methodology for testing and control
- Densitometers

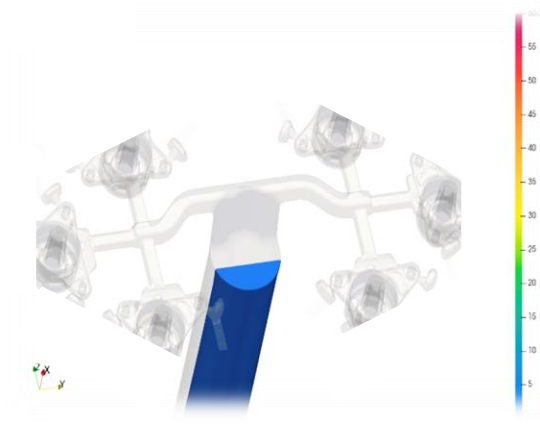
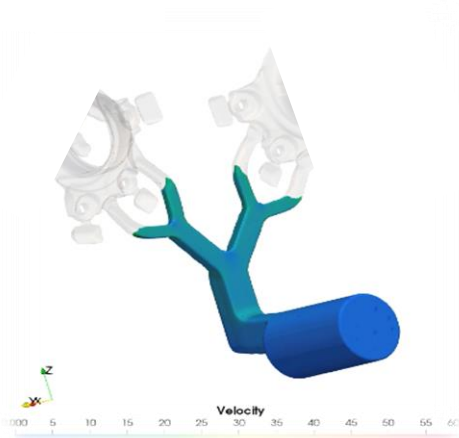






RFQ main activities

- Technical feasibility analysis (simulation if necessary)
- Production capacity verification
- Quotation submission (CBD)



NBI industrial Oradea

OFFER SOTUR2200172

Item	Company	Date	22 may 22	Year ref	ANR 00000 P00010100 (P00100) 00000000							
Item	Item											
Drawing N.	Description	Actual quantity	Material	Material (K/Gr)	Net weight (kg)	Loss (kg)	Gross weight (kg)	Material cost (K€)	Net (K€)	Flexibility (K€)	Added value (K€)	Part price (K€)

Testing

- Mold 2 cavities 1:1000K
- Finishing mold 2 cavities 4000K
- Tooling payment terms: 50% with purchase order, 50% with samples delivery, 50% with homologation

Customer:	SOP Buss 12	Lead time:	28 weeks for first off road & off ground parts
Supply date:	30 may 22	Remarks:	See project conditions in page 5.
Payment terms:	50 days		

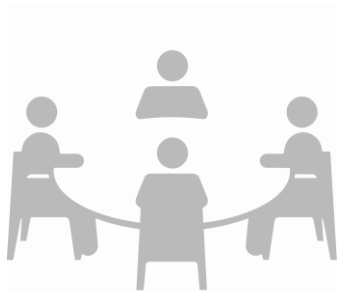
Prepared by: [Name]

CBD/Quotation example



Product & Process Design main activities

- Project team kick-off (project manager, quality, customer service, technical coordinator)
- Project plan definition. APQP launching
- Detailed technical analysis: simulations, process, tooling design
- Tooling Design freeze / PFMEA / Control plan

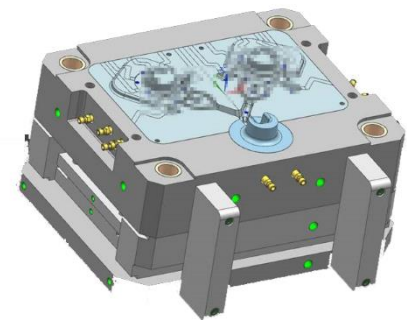


Business team + plant team

Kick-off check list

Task	Week	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1. Make PO issues	Task																								
2. Make PO conditions validation by NE	Task																								
3. PO to supplier	Task																								
4. 3D release	Task																								
5. Inspection cycle approval	Task																								
6. Tooling design review / simulation	Task																								
7. Tooling design approval	Task																								
8. BOM approval and purchase components and materials received	Task																								
9. 100% design approval	Task																								
10. Tool manufacturing & shipment	Task																								

Project timing plant

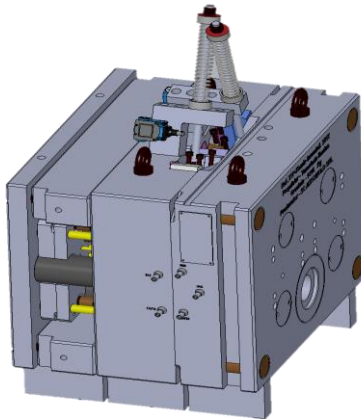


Tool design



Manufacturing main activities

- Tooling sub-suppliers nomination
- Tooling manufacturing outsourcing
- Plant readiness preparation





Industrialization main activities

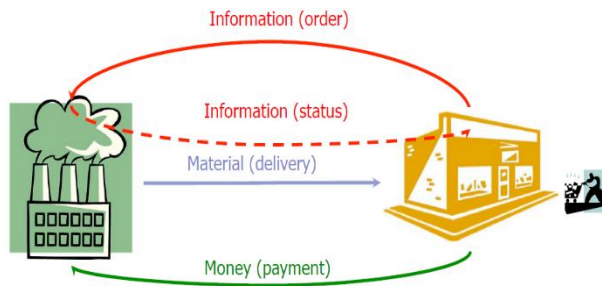
- Tooling shipment to NBI Plant
- Process set up parameters
- PPAP approval
- OTOP samples production



Sales and planning

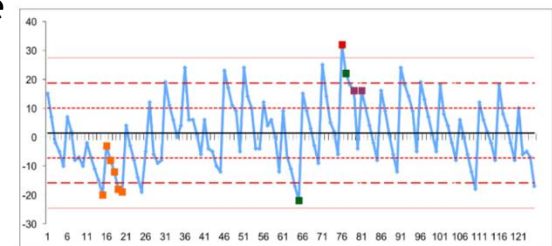
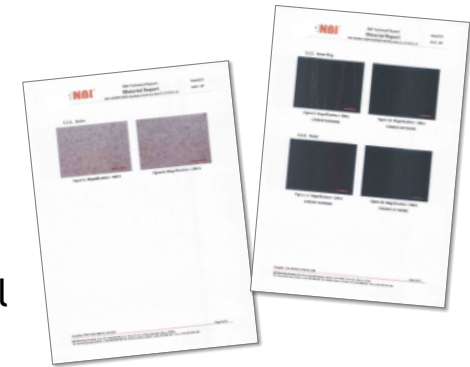


- Call-offs and orders integration in ERP by EDI
- Master plan and customer service located at the plant to assure a fluent and agile communication
- Demand analysis and forecast to react and adapt to the market movements
- Tooling life cycles monitoring and control
- Aluminum raw material safety stock
- Capacity booking possibility



Production and quality

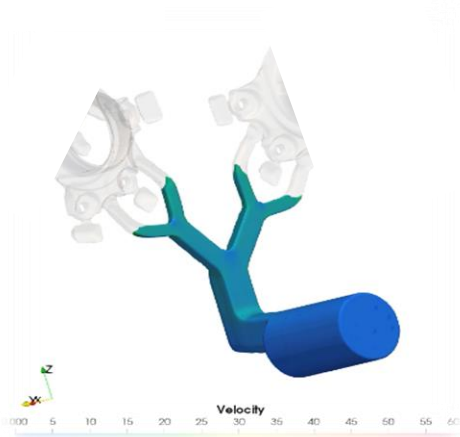
- OEE data acquisition and improvement action plan procedure
- Automatic injection shot parameter control and scrap
- Process automation
- SPC control
- Laser welding machine and ultrasound cleaning machine
- Die temperature control
- Automatic die spray
- Temperature control unit for Molds
- Supplier panel continuous development and evaluation
- Aluminum alloy marked in the runner system
- Material composition control with spectro analysis
- Recycled material ratio is controlled and with no contaminated material
- Alloy melting in separated furnace, not in holding furnace
- Automatic control and adjustment of the alloy temperature at the material extraction point and automatic pouring
- 100% quality visual control
- X-ray porosity control/ Cross section microscope report
- Internal process audits according to VDA 6.3



Engineering



- Flow simulation capacity at the plant for serial parts optimization
- Solidification simulation
- Failure analysis
- Cooperation with skilled R&D centers and casting & machining consultants
- Proposals to customer for part improvements
- Die casting and trimming tools modifications and repairs available in house



Key benefits with NBI group



Own production plant performing whole manufacturing process



Safety stock for fast delivery



Alternative reliable solution



Globally recognized brand by leading OEMs



Flexibility and quick decisions



Standard and tailor-made solutions



Customer centric mindset



Application and project engineering



Multi-language salesforce



Own laboratories



Improve customer's profitability



Financial strength



grupo | **NBI**[®]
gruponbi.com

NBI industrial Oradea S.R.L.

 Uzinelor Street No. 8 RO - 410605 Oradea, Romania

 0040 359 800207  infonbioradea@gruponbi.com