



CHEMIE PARK

BITTERFELD-WOLFEN



CHEMIEPARK BITTERFELD-WOLFEN

Site Presentation

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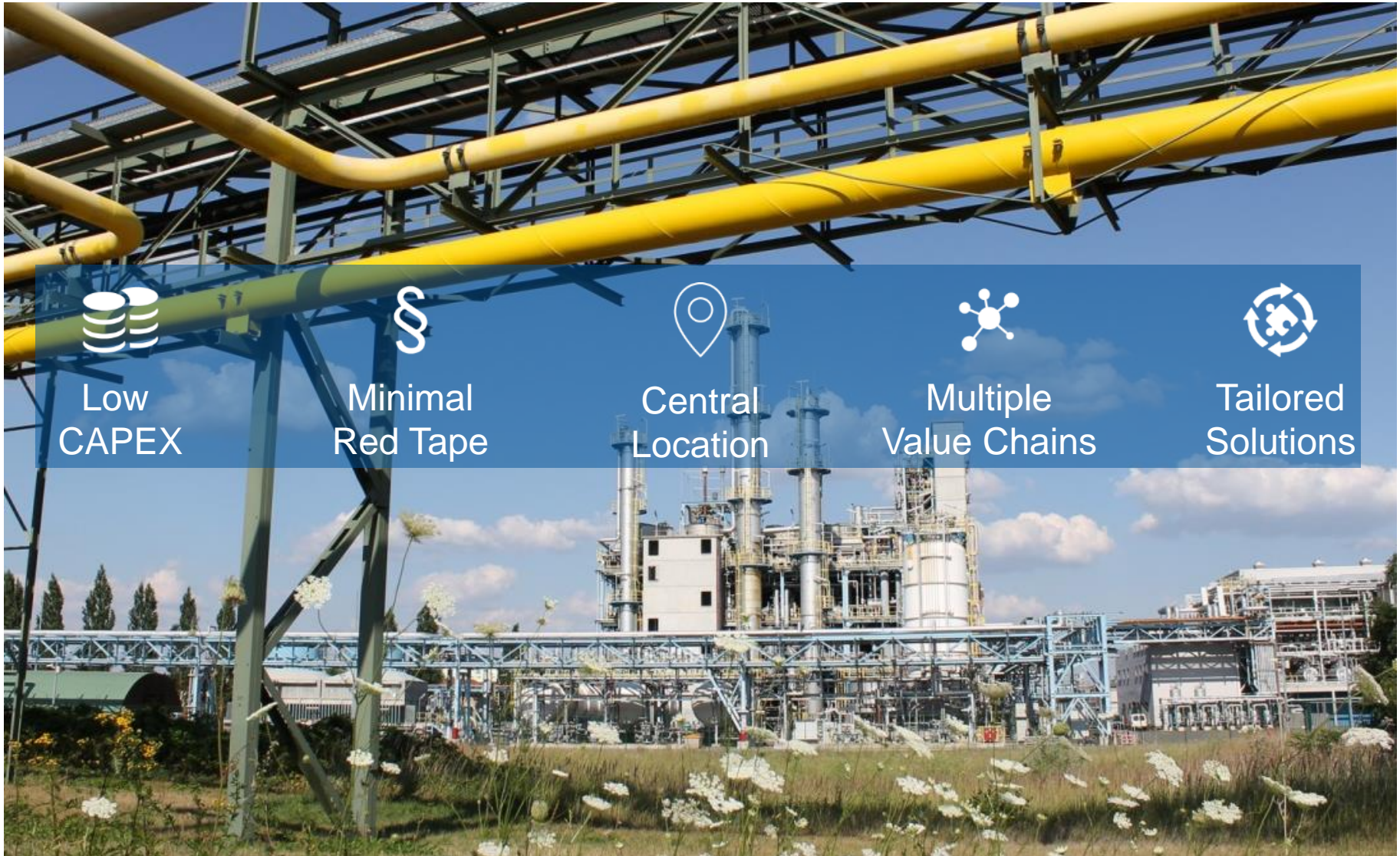


Why Site Selection Is Crucial For Chemical Companies

We all now live in a VUCA-world:
Volatility, Uncertainty, Complexity and Ambiguity

- Building a chemical plant is highly CAPEX-intense, especially on a green field without any support
- Avoiding sunk cost & stranded assets is imperative to sustain in competitive markets

Plants Grow Best In Chemical Parks



Low
CAPEX



Minimal
Red Tape



Central
Location



Multiple
Value Chains



Tailored
Solutions

Plug & Play Infrastructure And Free Market Access To All Services

- Risk free from resid. contamination ✓ Autonomy to buy & own
- Highly developed infrastructure ✓ Maximum flexibility to operate
- Open chemical park-concept ✓ Competitive priced services
- Independent site operator ✓ Focus on core competencies



Chemiepark Bitterfeld-Wolfen Site Profile - I

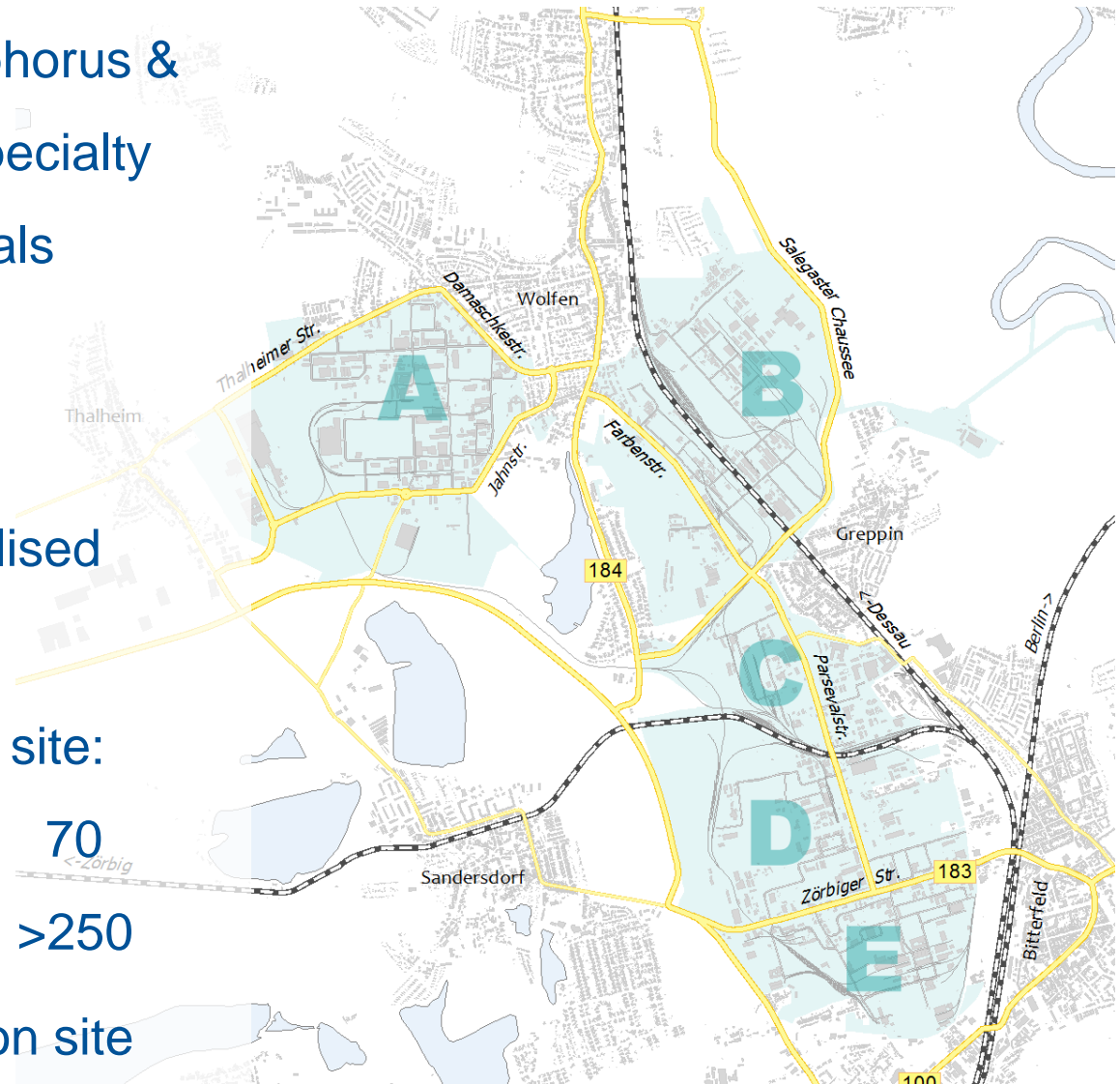
- Founded in 1893
- Located between Berlin & Leipzig
- Investment volume since 2000:
overall €4.5b, infrastructure €350m
- Direct railroad connection
- Motorways A9/ A14 ~5 km
- Water ways Saale/Elbe 30 km
- Airport Leipzig/Halle 30 km



Chemiepark Bitterfeld-Wolfen

Site Profile - II

- Products: chlorine, phosphorus & silicon products, fine & specialty chemicals, pharmaceuticals
- Total area 1,200 ha
available 120 ha
- Supply & disposal specialised on chemical industry
- Number of companies on site:
manufacturing industry 70
service providers >250
- Over 13,000 employees on site



Providing Infrastructure Services: CPG, GWK & PD energy



Chemiepark Gesellschaft (CPG)

- Site operator
- Water supply & wastewater collection
- Pipe bridges, roads & buildings
- Engineering services



Gemeinschaftskläwerk (GKW)

- Wastewater treatment plant
- 4 aerobic BIOHOCH® reactors
- 1 anaerobic pre-treatment plant
- 9m m³ treated wastewater annually
- Sewage sludge incineration plant



PD energy

- Waste treatment plant
- 10 MW electrical output
- 15 MW of steam and heating
- 130,000 t treated waste annually
- Planned sludge incineration plant

Cradle Of Industrial Electrochemistry, 1st Chlor-Alkali Electrolysis Starts In 1894

W = 300 GWh
P = 40 MW

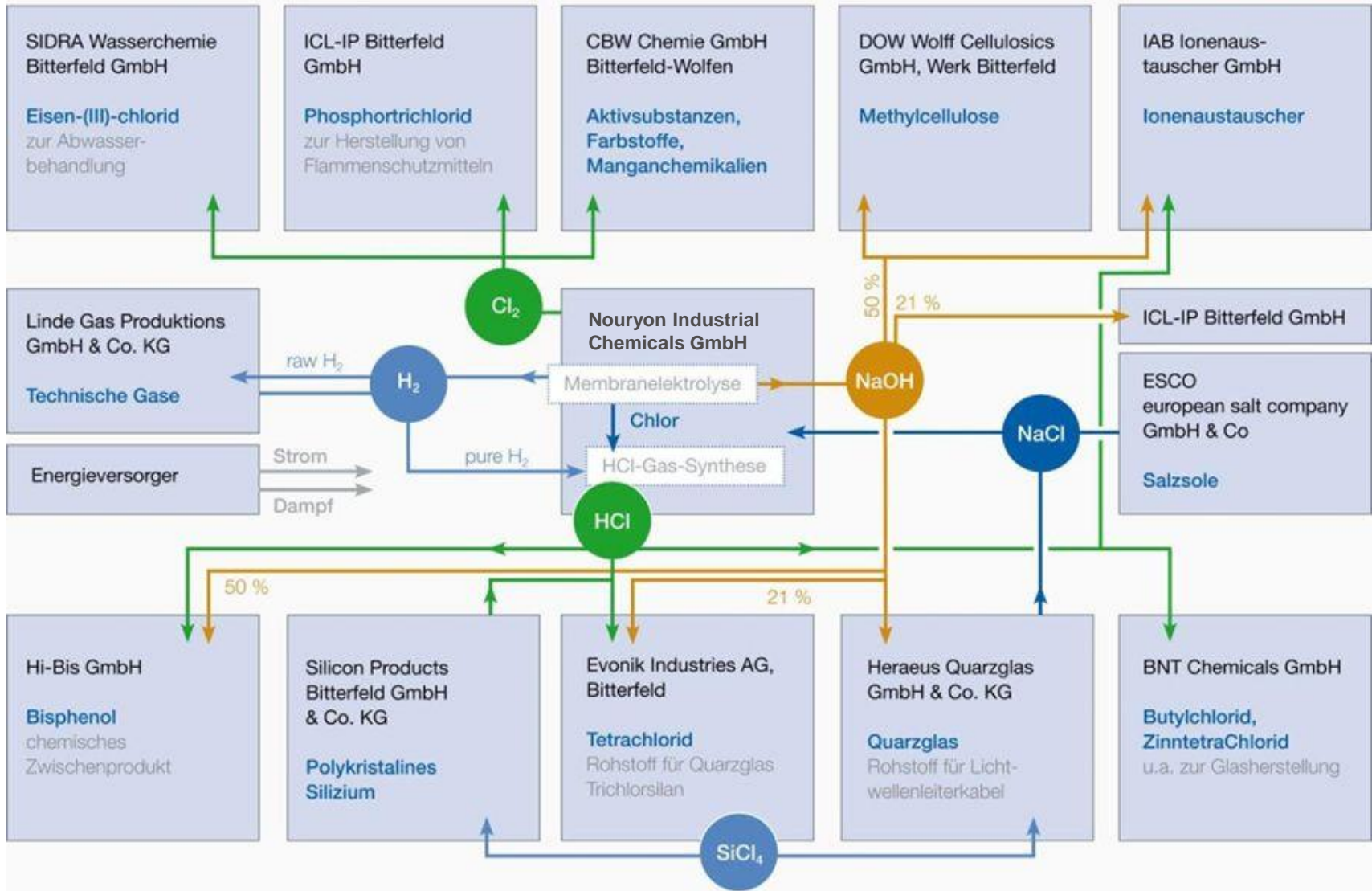


- Nouryon operates a chlor-alkali electrolysis plant and produces caustic soda and chlorine, with hydrogen as a by-product
- Linde purifies, compresses and sells hydrogen via pipeline
- gaseous H₂ as backup for emergency supply

- Chlorine: 100.000 tpa
- Caustic: 112.000 tpa
- Hydrogen: 31,5m Nm³ (2.832 t)
- Local demand for hydrogenation:
 - >50% HCl-synthesis
 - Semi-conductors
 - Metalls

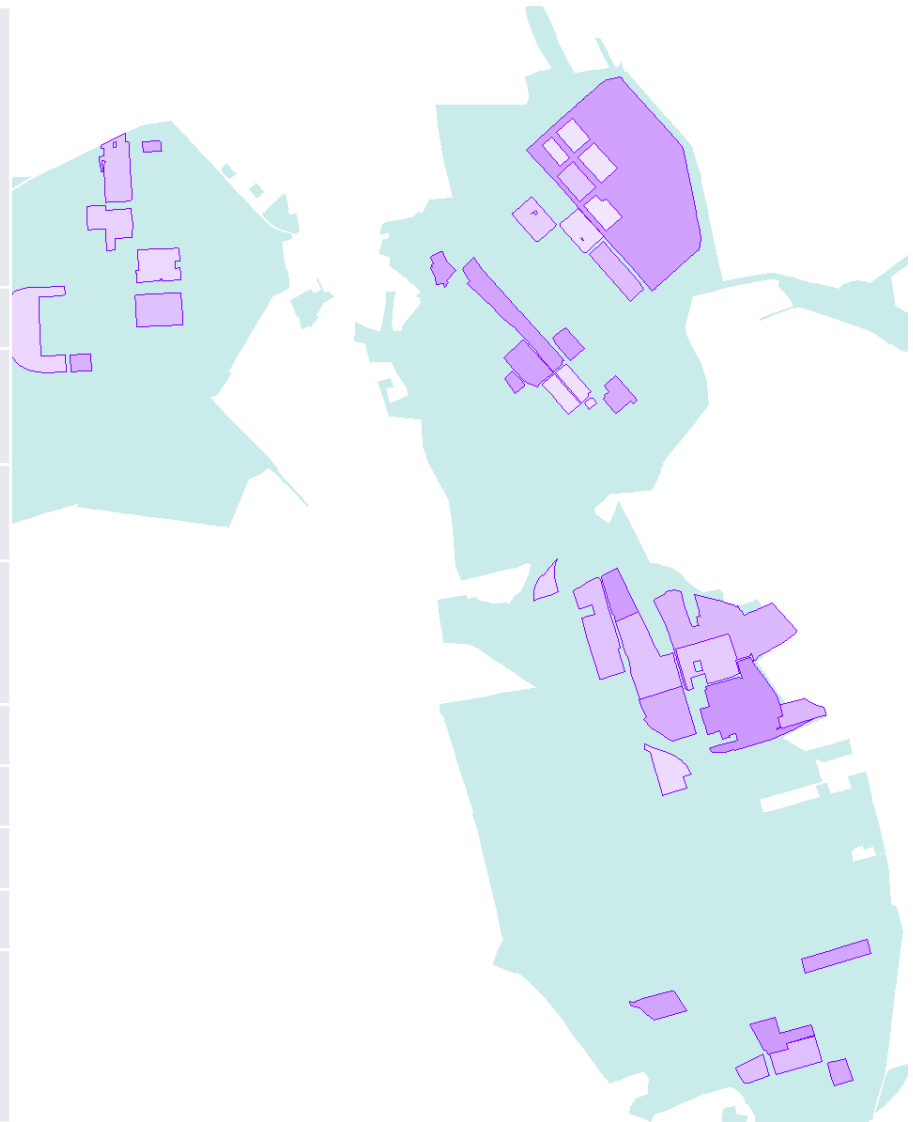


Product Flow Of Integrated Feedstock Via Pipelines “Over The Fence”



35 Chemical & Pharmaceutical Companies Are On Site

Bayer	DE	Aspirin, Alka-Seltzer	€750m
Allnex Resins	DE	Coating resins	
Lanxess	DE	Ion exchange resins	
Dow	US	Methyl cellulose	
Heraeus	DE	Synthetic quartz glass	€560m
Silicon Products	DE	Silicon ingots	€120m
Nouryon	NL	Chlorine, caustic soda, hydrochloric acid	€92m
CBW Chemie Bitterfeld-Wolfen	DE	Custom synthesis, intermediates, special chemicals	€70m
Hi-Bis	JP	Bisphenol	€50m
Evonik	DE	Silicon tetrachloride	€44m
ICL-IP	IL	Phosphorus chemicals	€40m
Clariant	CH	Zeolites	€40m
ORGANICA Feinchemie	UA	Fine chemicals, laser dye-stuffs, diagnostics, photochemistry	€15m



Every Aspirin pill in Europe is produced in Bitterfeld

"Our dream was to produce three billion pills a year, now it is three times as many. One of the biggest advantages of the location is that the employees are well trained and qualified."

Dr. Christian Schleicher, Managing Director of Bayer Bitterfeld



Bayer Bitterfeld GmbH

Total investment: €750m, Employees: >850 on site

Products: Aspirin and others, ~9b pills/year, ~120b pills since launch

Markets: Germany and ~60 other countries

1/3 of the global supply of synthetic quartz glass is produced in Bitterfeld

"Heraeus is a global player and market leader. If we want to remain that way, we have to focus on efficiency, continuously optimize processes, keep production lean and generate an optimum yield from the raw materials."
Hagen Sandner, Managing Director of Heraeus Quartzglas Bitterfeld



Heraeus Quartzglas Bitterfeld GmbH

Total investment: €560m, Employees: >530 on site

Products: >4,000 t/a synthetic quartz glass, global demand ~12,000 t/a

Markets: global, mainly USA and China



CHEMIEPARK
BITTERFELD-WOLFEN
Infrastrukturdienstleistungen

THE WORLD
OF CHEMISTRY.
CHEMISTRY
FOR THE WORLD.

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