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**NEWMARK**

# Newmark Global Strategy

**Robert Hess, Vice Chairman – Global Strategy, Newmark**

**February 22, 2023**



# Europe and North America’s battery cell value chain growth: Unprecedented!

Forbes

Mar 15, 2021, 09:39am EDT | 3,235 views

Six New Gigafactories Planned By 2030 As Volkswagen Hunts Down Tesla

FINANCIAL TIMES

Electric vehicles

+ Add to myFT

Ford plans Turkey battery plant as all vans to go green by 2035

US group promises seven new electric vehicles for Europe starting from next year

REUTERS

Europe

Canada's Rock Tech Lithium to build \$544 million plant in Brandenburg

October 11, 2021  
1:55 PM GMT+2  
Last Updated 5 months ago

Reuters

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~35  
announced projects

>1,200  
GWh total capacity

>80bn  
CapEx investments

>100k  
jobs created

Bloomberg

Business | Hyperdrive

Northvolt Plans a Third Battery-Materials Factory in Sweden

By [Rafaela Lindeberg](#)

February 25, 2022, 7:46 AM GMT+1 Updated on February 25, 2022, 8:20 AM

Elon Musk

@elonmusk

🖤❤️🟡 GIGA BERLIN 🟡❤️🖤

9:22 PM · Nov 12, 2019 · Twitter for iPhone

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EU approves more state aid to boost car batteries industry

The European Union has approved 2.9 billion euros in subsidies from 12 member countries to develop a project aiming at developing the electric battery industry

By [SAMUEL PETREQUIN](#) Associated Press

26 January 2021, 21:25 • 3 min read

abcNEWS

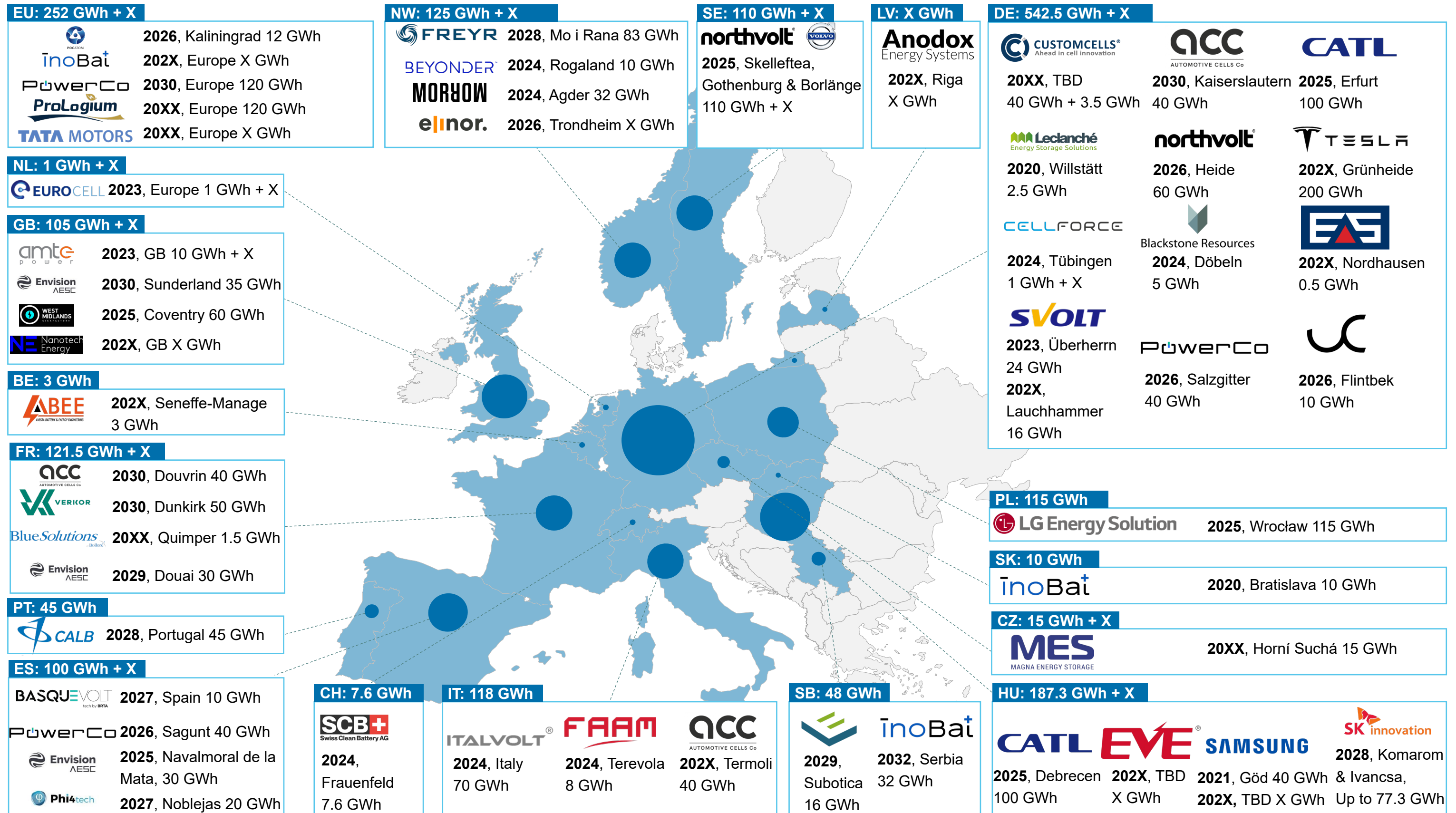
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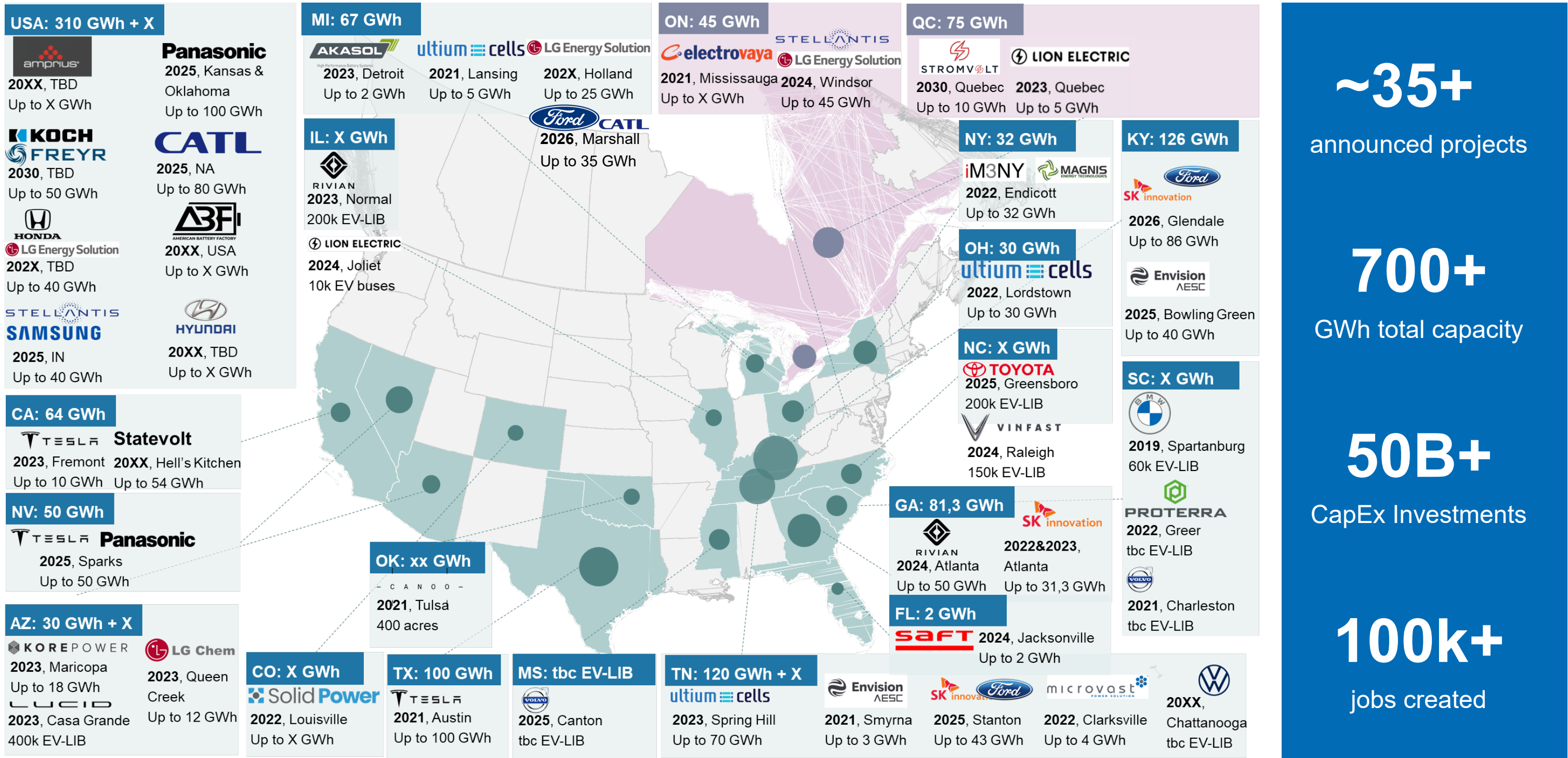
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NEWMARK 2

# Announced Gigafactories in Europe – 1,900+ GWh capacities confirmed



# Industry Highlight: North American Electric Vehicle Activity (and counting!)



# EV Projects Map for Asia

South Korea: 14.7 GWh + X

**SAMSUNG**

202X, Up to 1 GWh, Cheonan  
2023, Up to 1 GWh, Seoul

**LG Energy Solution**

2024, Up to X GWh, Ochang



2018, Up to 4,7 GWh, Seosan

Japan: 60,9 GWh + X



2030, Up to 40 GWh, Himeji



2007, Up to 2,6 GWh, Kanagawa  
2028, Up to 18 GWh, Ibaraki

**SAMSUNG**

201X, Hyogo  
2023, Wakayama  
2010, Osaka

China: 1203 GWh + X

**CATL**

2021, Up to 80 GWh, Guiyang  
2018, Up to 10 GWh, Liyang  
2021, Up to 120 GWh, Ningde  
2021, Up to 80 GWh, Shanghai  
2021, Up to 15 GWh, Yibin  
2021, Up to 25 GWh, Zhaoging  
2021, Xiamen  
2013, Xining  
202X, Up to 50 GWh, Yichang



2023, Up to 45 GWh, Nanning  
2023, Up to 22 GWh, Taizhou  
202X, Up to 30 GWh, Xiangyang  
202X, Up to 45 GWh, Changchu  
202X, Up to 15 GWh, Fuzhou  
2022, Up to 15 GWh, Shaoxing



2025, Up to 50 GWh, Hefei  
202X, Up to 50 GWh, Chengdu



2023, Up to 15 GWh, Jiangyi  
2022, Up to 10 GWh, Ordos  
202X, Up to 40 GWh, Shiyan  
2023, Up to 20 GWh, Wuxi

**EVE**

2024, Up to 50 GWh, Chengdu  
2025, Up to 20 GWh, Jingmen  
202X, Up to 16 GWh, Jingmen  
2023, Up to 10 GWh, Quijing



202X, Up to 30 GWh, Ganzhou

**FOXCONN**

2024, Up to 1 GWh, Kaohsiung

**GanfengLithium**

202X, Up to 10 GWh, Chongqing



2023, Up to 12 GWh, Chongqing

**GOTION**

2023, Up to 50 GWh, Hefei  
2022, Up to 30 GWh, Nanjing  
2022, Up to 30 GWh, Yichun



2022, Up to X GWh, Dalian



2014, Up to X GWh, Nanjin

**LISHEN**

2021, Up to 10 GWh, Tanjin



2025, Up to 26,8 GWh, Guangzhou

**Panasonic**

2018, Dalian / 2008, Suzhou / 2001, Wuxi



2023, Up to 3 GWh, Taiwan

**SUNWODA**

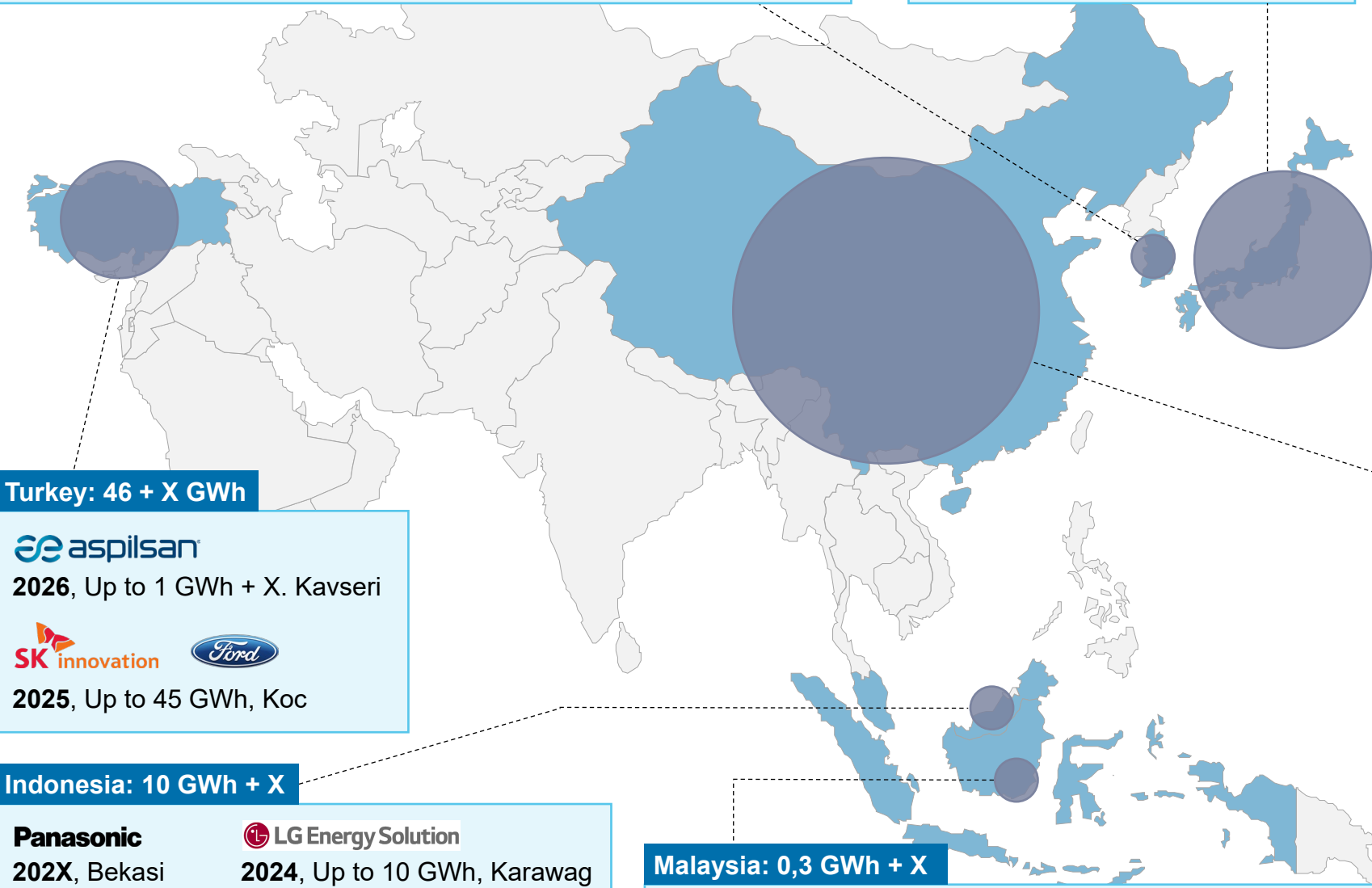
202X, Up to 30 GWh, Zhuhai  
202X, Up to 20 GWh, Shifang



2023, Up to 57 GWh, China

**SVOLT**

202X, Up to 60 GWh, Chenadu  
202X, Up to 30 GWh, Dazhou  
202X, Up to 20 GWh, Suining



Turkey: 46 + X GWh



2026, Up to 1 GWh + X, Kavseri



2025, Up to 45 GWh, Koc

Indonesia: 10 GWh + X

**Panasonic**

202X, Bekasi



2024, Up to 10 GWh, Karawag

**CATL**

2024, Up to X GWh, TBD

Malaysia: 0,3 GWh + X

**Panasonic**

2012, Up to 0,3 GWh, Kedah

**SAMSUNG**

2024, Up to X GWh, Seremban

# So where are the remaining sites?

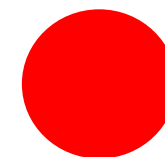
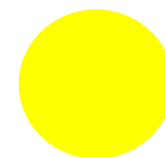
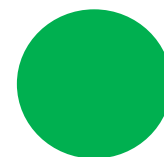
**Which location and site is optimal for my company?**

**Where are the remaining "shovel ready" Megasites in the US?**

**What does a systematic location screening process look like?**

**How can locations create sustainable competitive advantage?**

**What are short and long opportunities & risks of each site and location?**



## A. Introduction of Newmark



# Global Reach: Locally Expert, Globally Connected



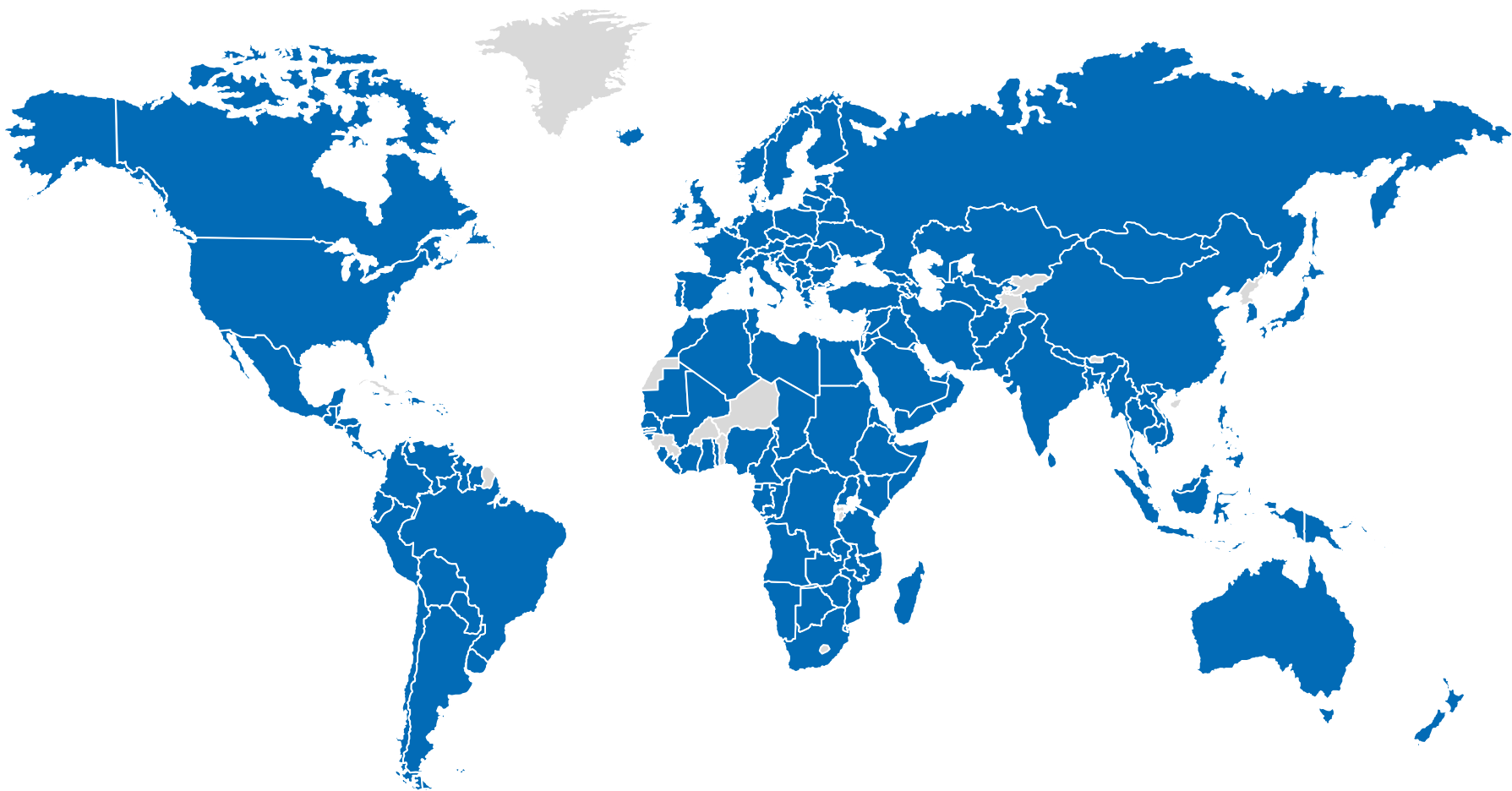
Entrepreneurial spirit and **future-facing** vision.



**99%** of locations directly serviced by Newmark



One of the **world's leading** commercial real estate platforms.



## Delivery of Services:

Global delivery in over 100 countries with **best in market commitment**

**92**

years in business

**100+**

countries

**\$3.0B+**

annualized revenue

**~140**

offices worldwide

**500M**

square feet managed worldwide

Complete **suite of services** is tailored to every type of client:

- Brokerage & Transaction Management
- Lease Administration & Audit Services
- **Global Strategy & Consulting**
- Workplace Strategy & Human Experience
- Technology & Innovation
- Program & Project Management
- Facilities Management

# Global Strategy & Consulting

**What Do We Do:** We are **management consultants** who help companies determine **what** facilities they need, **where** they are needed, and **how** those facilities **operating conditions** should be organized geographically, functionally, and socially while **optimizing costs** to the business.



500+

CLIENTS ACROSS  
MULTIPLE INDUSTRIES

15-20

AVG YEARS OF  
CONSULTANT EXPERIENCE

10-30%

OPERATING COST SAVINGS  
ACROSS ALL ENGAGEMENTS

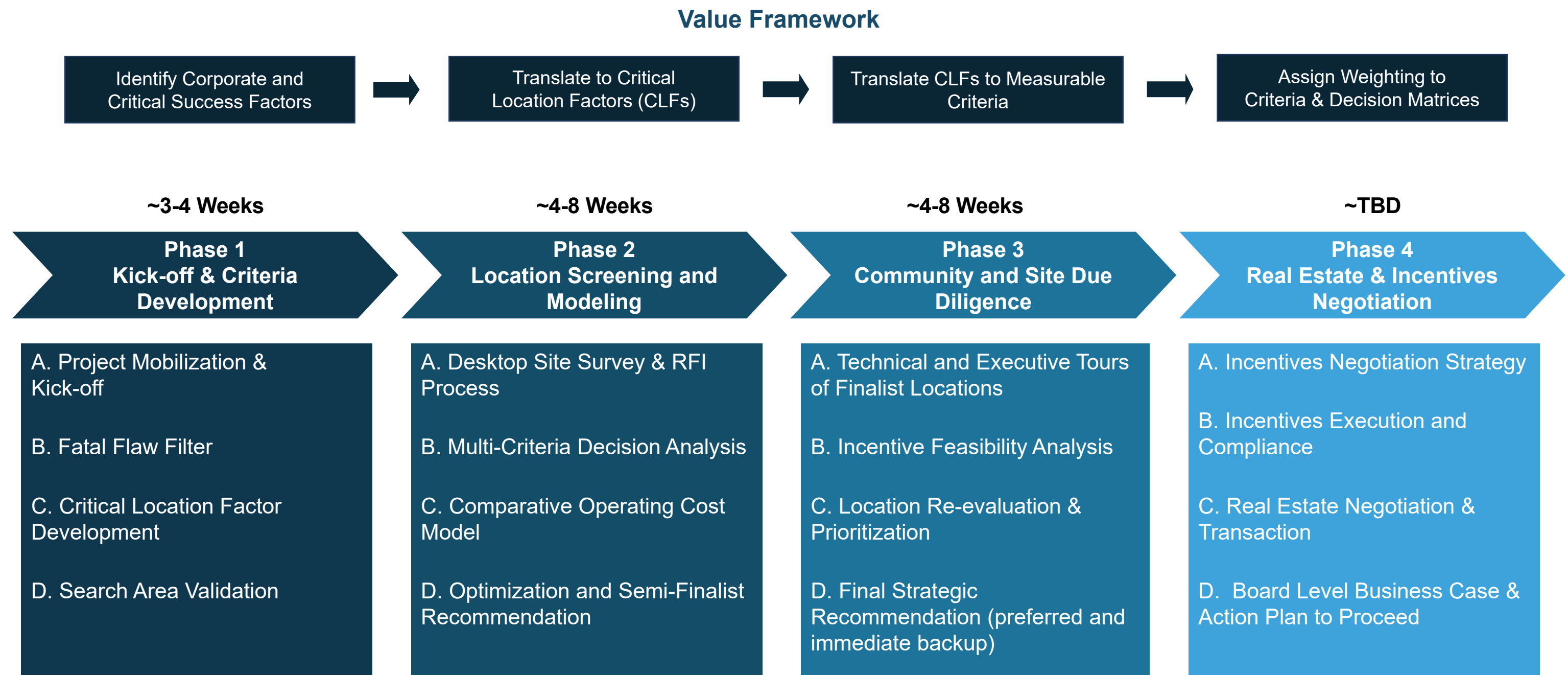
\$5B+

IN ECONOMIC  
INCENTIVES SECURED

# The Jeopardy! Board of Potential Issues

<b>Complex Labor Requirements</b>	<b>Existing Ecosystem</b>	<b>Utility Reliability</b>
<b>Unique Utility Needs</b>	<b>Environmental Regulation</b>	<b>Availability of sites/buildings</b>
<b>Supply Chain and Logistics</b>	<b>Utility Cost</b>	<b>Workforce Availability, Attitude, and Aptitude</b>
<b>Access to Renewables</b>	<b>Infrastructure Scalability</b>	<b>Training Infrastructure</b>

# Site Selection Methodology



It's all about providing optionality and balancing cost, quality and risk

# Reality of “Megasites”

Sites are scored on a variety of factors, with very few of the 50+ hectare scale truly being considered ready for immediate development; sites with “unicorn” status are heavily sought after and the competition for control is intense

Ⓐ Location and Site Overview		
Ⓐ-1	Good 6 lane highway access	✓
Ⓐ-2	Susceptible to flooding	✗
Ⓐ-3	Adjacent heavy industry - Poor fit with client brand	✗
Ⓐ-4	Inaccessible rail line with carrying “dangerous” cargo	✗
Assessed score		3

Ⓑ Site config and condition		
Ⓑ-1	Active oil well on site	✗
Ⓑ-2	“Immovable” 69kV line cuts site in two	✗
Ⓑ-3	Large contiguous 405 Acre site	✓
Assessed score		3

Ⓒ Power		
Ⓒ	69kV line direct from power station (No transformer)	✓
Assessed score		7



Ⓓ Water		
Ⓓ-1	Pipe factory uses most of Non-Potable waste	✗
Ⓓ-2	No Potable water connection to site	✗
Assessed score		1

Ⓔ Gas		
Ⓒ	8 Bar gas main	✓
Assessed score		7

Ⓕ Sewer		
Ⓒ	Pipe factory uses much sewer capacity	✗
Assessed score		3

Ⓖ Permit Readiness		
Ⓒ	3 out of 6 necessary permits in place	?
Assessed score		5

Ⓗ Econ Developer Capability		
Ⓒ	Inexperienced with large projects, but capable / driven	?
Assessed score		5

Site Name	Other sites in search		
	①	②	③
Ⓐ Location Overview	3	7	7
Ⓑ Site Condition	5	1	5
Ⓒ Power	7	7	7
Ⓓ Water	1	9	9
Ⓔ Gas	7	9	5
Ⓕ Sewer	3	5	9
Ⓖ Permit Readiness	5	3	5
Ⓗ Econ Dev Capability	5	3	5
Overall Score	3	5	7
Verdict	Out	tbc	Keep

# Cost analysis of location-specific parameters

\*Project investments and VAT impact

LAND and/or BUILDING PURCHASE	Site #1	Site #2	Site #3	Site #4	Site #5	Site #6	Site #7	Site #8
Number of Hectares	120	120	120	120	120	120	120	120
Building SM	159,921	159,921	159,921	159,921	159,921	159,921	159,921	159,921
Cost per Hectare	€ 400,000	€ 200,000	€ 270,000	€ 230,000	€ 108,074	€ 150,000	€ 170,000	€ 170,000
Real Estate Transfer Tax	3%	3%				6%		
Total Land Cost (before incentive)	€ 49,440,000	€ 24,720,000	€ 32,400,000	€ 27,600,000	€ 12,968,880	€ 19,080,000	€ 20,400,000	€ 20,400,000
Annual Lease cost (In annual Cash Flow where needed)								

\*Real property tax schema and impact

PROPERTY IMPROVEMENTS	Site #1	Site #2	Site #3	Site #4	Site #5	Site #6	Site #7	Site #8
Real Property Taxes	Assessed Ratio %							
Severe Top Grading	Assessment Basis							
Utilities Upgrades	Assessed Value - Books							
Total	Assessed Value - Books							
COST & CONSTRUCTION MAT'L'S & SALES TAX	Year 2023							
	Year 2024							
	Year 2025							
	Year 2026							
	Year 2027							
	Year 2028							

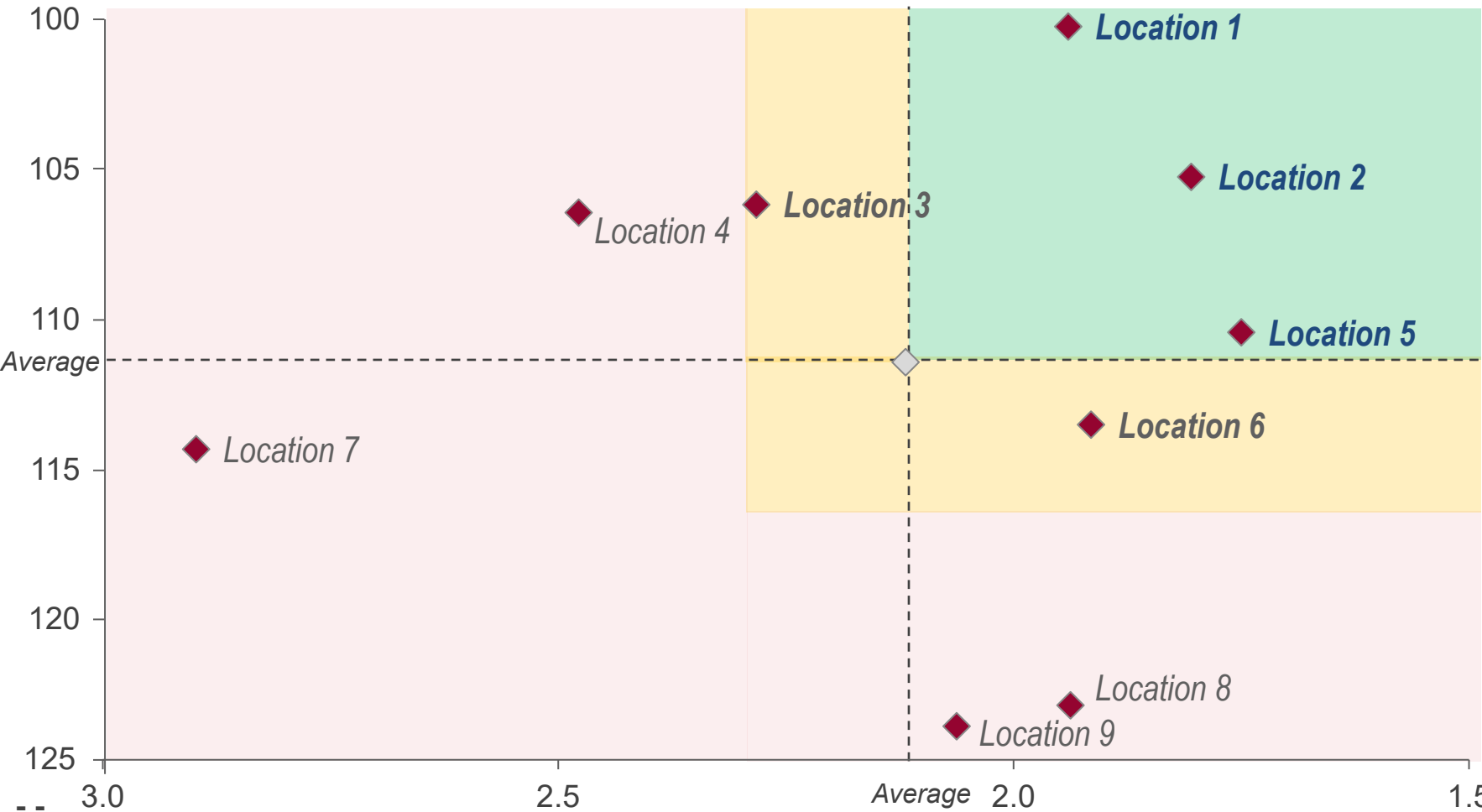
\*Utility unit costs

12-YEAR NET PRESENT VALUE ANALYSIS WITHOUT INCENTIVES										Site #3	Site #4	Site #5	Site #6	Site #7	Site #8
INVESTMENTS										13,000,000	13,000,000	13,000,000	13,000,000	13,000,000	13,000,000
Property Purchase / Lease										0.11	€ 0.11	€ 0.14	€ 0.16	€ 0.13	€ 0.13
Building Depreciation (phased in)										21%	21.00%	23%	19%	21.0%	21.0%
Building Construction Materials Sales Tax										291,837	€ 291,837	€ 418,600	€ 400,708	€ 354,900	€ 354,900
M&E Depreciation (phased in)										1,389,700	€ 1,389,700	€ 1,820,000	€ 2,108,990	€ 1,890,000	€ 1,690,000
M&E Sales Tax										3,502,044	€ 3,502,044	€ 5,023,200	€ 4,808,497	€ 4,250,000	€ 4,258,800
Site Improvements										16,676,400	€ 16,676,400	€ 21,840,000	€ 25,307,880	€ 20,200,000	€ 20,280,000
TOTAL INVESTMENTS															
COSTS										Site #3	Site #4	Site #5	Site #6	Site #7	Site #8
RECURRING COSTS										1,108	1,108	1,108	1,108	1,108	1,108
Human Resources (HR)										21%	21.00%	23%	19%	21.0%	21.0%
Wages - Direct										190.0	190.0	190.0	190.0	190.0	190.0
Wages - Indirect										210,547	€ 210,547	€ 210,547	€ 210,547	€ 210,547	€ 210,547
Fringe Benefits										44,215	€ 44,215	€ 48,428	€ 40,004	€ 44,215	€ 44,215
Human Resources										2,526,559	€ 2,526,559	€ 2,526,559	€ 2,526,559	€ 2,526,559	€ 2,526,559
Cost Differential: Cost over Low															
Utilities										Site #3	Site #4	Site #5	Site #6	Site #7	Site #8
Electricity										37,833	37,833	37,833	37,833	37,833	37,833
Electricity - Sales Tax										10%	10%	8%	19%	10%	10%
N2										6,888	€ 6,888	€ 908	€ 11,358	€ 4,797	€ 2,838
N2 - Sales Tax										82,628	€ 82,628	€ 10,896	€ 136,291	€ 57,568	€ 34,061
Process Water										826,280	€ 826,280	€ 136,200	€ 717,320	€ 575,684	€ 340,614
Process Water - Sales Tax															
Wastewater										1.94	€ 1.94	€ 0.30	€ 2.60	€ -	€ -
Wastewater - Sales Tax										10%	10%	8%	19%	21%	21%
Total Utilities										2,619	€ 2,619	€ 324	€ 6,069	€ -	€ -
Cost Differential: Cost over Low										31,428	€ 31,428	€ 3,888	€ 80,028	€ -	€ -
Taxes										314,280	€ 314,280	€ 48,600	€ 421,200	€ -	€ -
Real Property															
Personal Property															
Corporate Income Tax															
Local Business Tax															
Property Taxes															
TOTAL RECURRING COSTS															
TOTAL COSTS															
TOTAL INVESTMENTS & COSTS (NPV)															
AMOUNT OVER LOWEST															
% OVER LOWEST															
TOTAL INVESTMENTS & COSTS (NPV) LESS INCENTIVES										\$20,343,519	\$20,343,519	\$24,551,359	\$28,972,959	\$23,382,243	€ 23,147,173

# Reconciliation: Optimizing Factors

Cumulated costs  
2025-2035, \$M

Quantitative Criteria
<ul style="list-style-type: none"><li>Labor costs</li><li>Utilities (electricity, gas)</li><li>Land costs (incl. additional investment demand)</li><li>Construction costs</li><li>Logistics inbound</li><li>Logistics outbound</li><li>Taxation</li><li>Potential Incentives</li></ul>



Qual. Score  
1 (best) – 5 (worst)

Qualitative Criteria	
<ul style="list-style-type: none"><li>Political &amp; business environment (20%)</li><li>Industry presence (35%)</li><li>Labor market &amp; education (30%)</li></ul>	<ul style="list-style-type: none"><li>Expat environment (5%)</li><li>Logistics (10%)</li></ul>

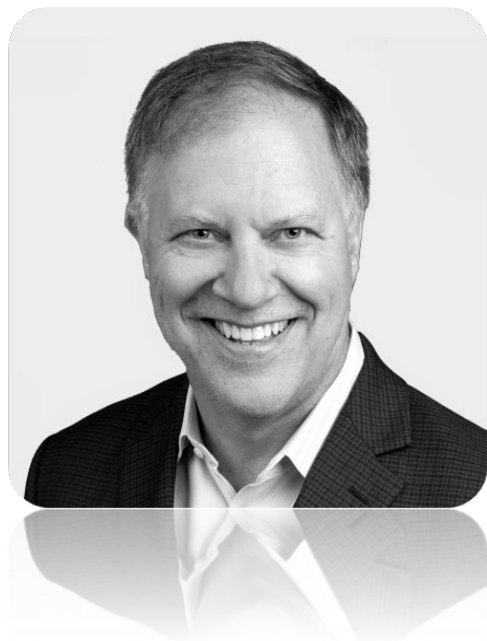
- Prio 1 locations
- Opportunity Areas
- Eliminate

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# Q&A

# Thank You!

For More Information:



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