

Newmark Global Strategy

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

Forbes

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

~35
announced projects

>1,200
GWh total capacity

>80bn
CapEx investments

>100k
jobs created

Bloomberg

Elon Musk 
@elonmusk

   GIGA BERLIN   

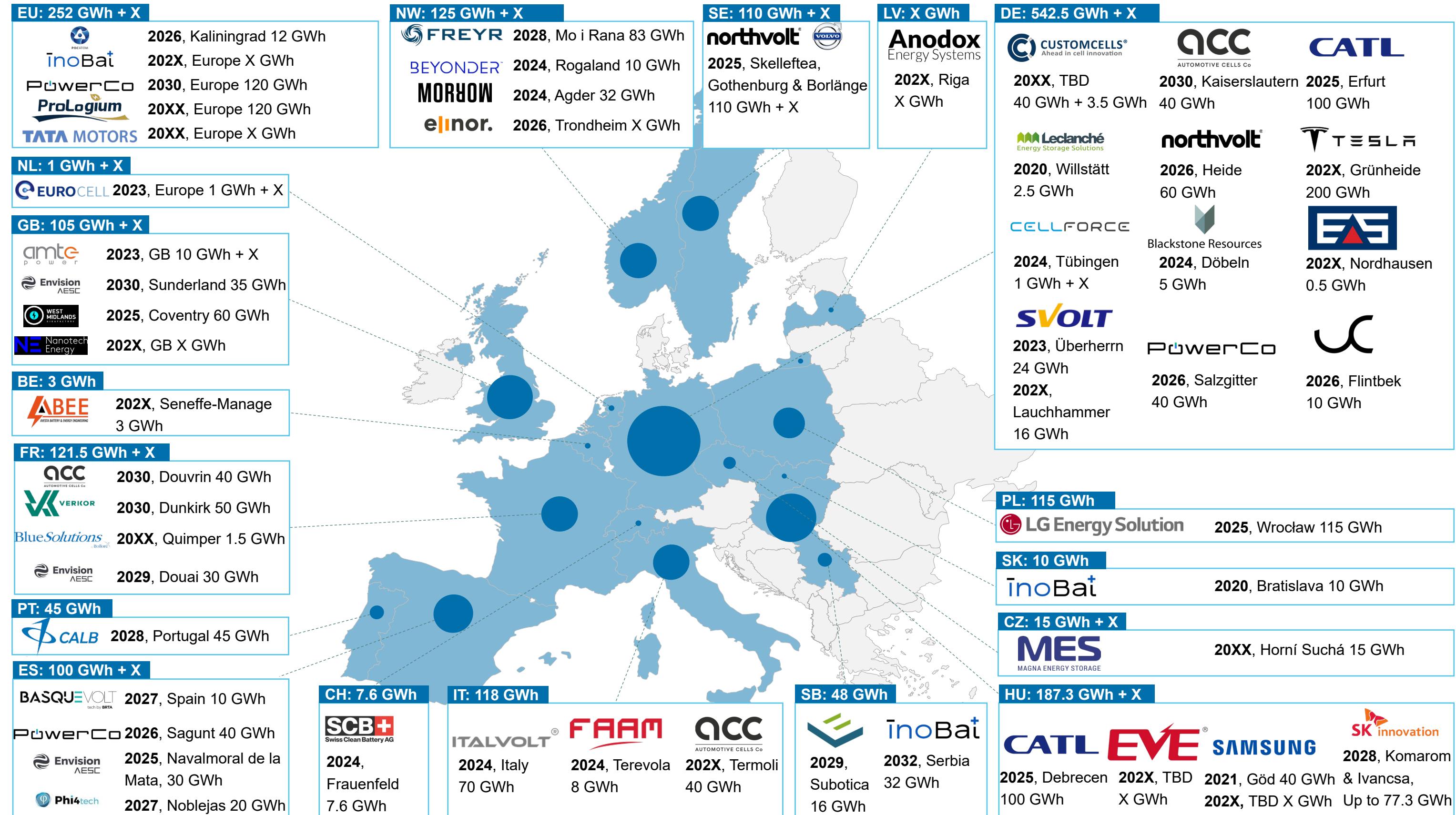
9:22 PM · Nov 12, 2019 · Twitter for iPhone

6.2K Retweets 66.2K Likes

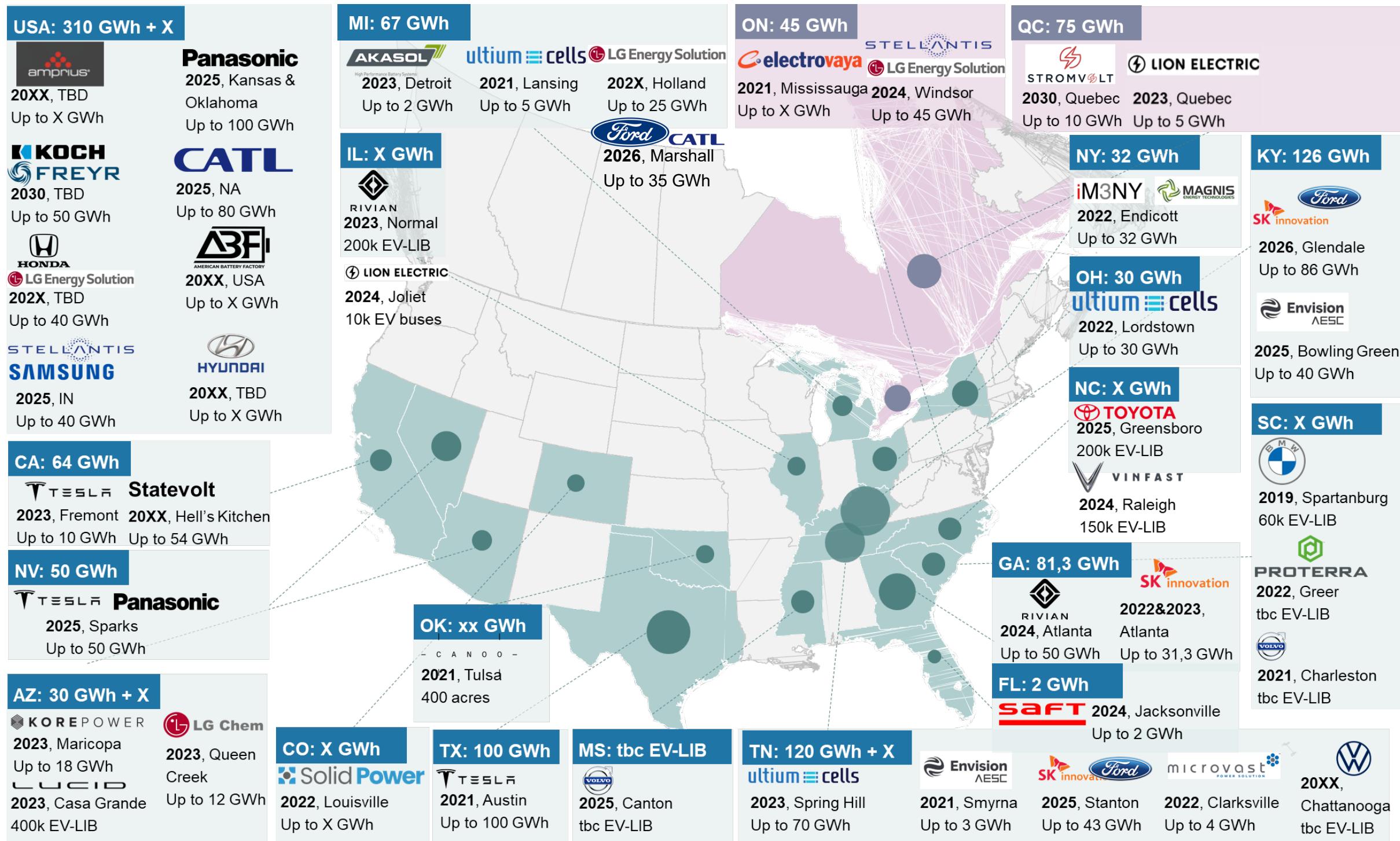
EU approves more state aid to boost car batteries industry

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

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



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



~35+
announced projects

700+
GWh total capacity

50B+

CapEx Investments

100k+
jobs created

COMPETITIVE LANDSCAPE

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

SK innovation

2018, Up to 4,7 GWh, Seosan

Japan: 60,9 GWh + X

prime planet energy & solutions

2030, Up to 40 GWh, Himeji

Envision AESC

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

BYD

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

CALB

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

Envision AESC

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

PARASIS

202X, Up to 30 GWh, Ganzhou

FOXCONN

2024, Up to 1 GWh, Kaohsiung

GanfengLithium

202X, Up to 10 GWh, Chongqing

GEELY

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

prime planet energy & solutions

2022, Up to X GWh, Dalian

LG Energy Solution

2014, Up to X GWh, Nanjin

LISHEN

2021, Up to 10 GWh, Tanjin

ProLogium

2025, Up to 26,8 GWh, Guangzhou

Panasonic

2018, Dalian / 2008, Suzhou / 2001, Wuxi

SUNWODA

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

SK innovation

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

aspilsan

2026, Up to 1 GWh + X, Kavseri

SK innovation

2025, Up to 45 GWh, Koc

Indonesia: 10 GWh + X

Panasonic

202X, Bekasi

LG Energy Solution

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?

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

Which location and site is
optimal for my company?

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

Complex Labor Requirements

Existing Ecosystem

Utility Reliability

Unique Utility Needs

Environmental Regulation

Availability of sites/buildings

Supply Chain and Logistics

Utility Cost

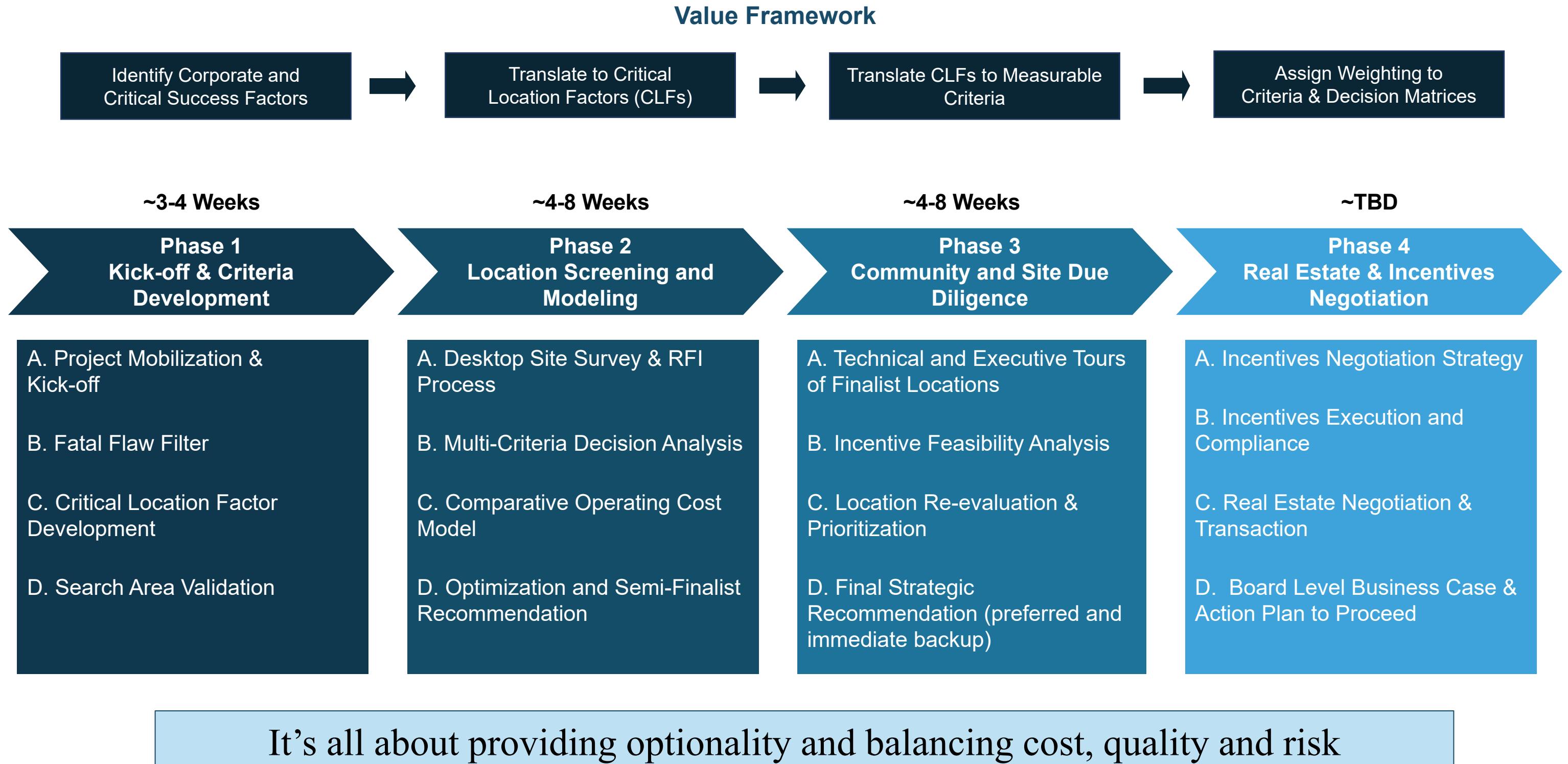
Workforce Availability, Attitude, and Aptitude

Access to Renewables

Infrastructure Scalability

Training Infrastructure

Site Selection Methodology



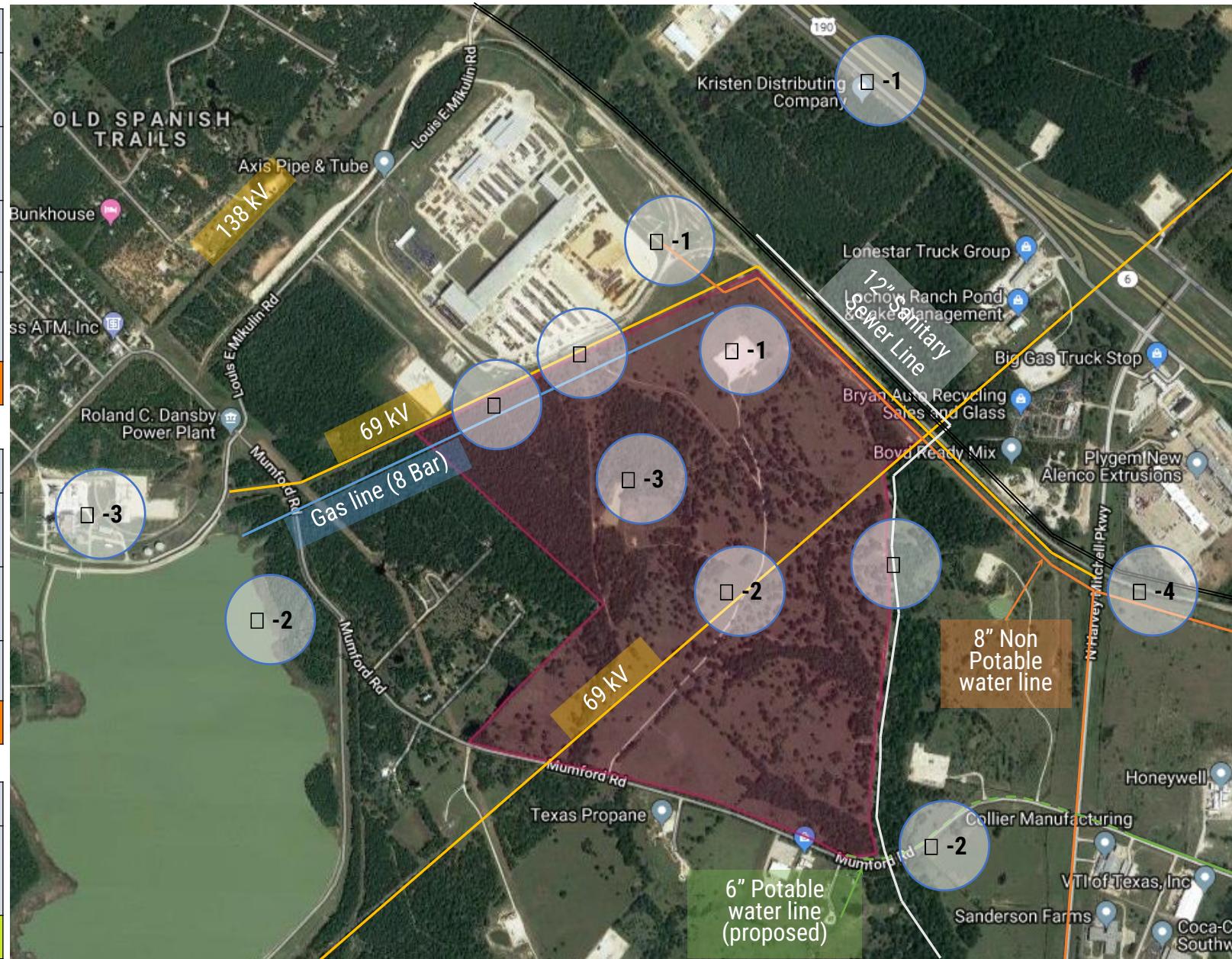
Reality of “Megasites”

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

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

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

③ Power	
③ 69kV line direct from power station (No transformer)	✓
Assessed score	7



④ Water	
④-1 Pipe factory uses most of Non-Potable waste	✗
④-2 No Potable water connection to site	✗
Assessed score	1

⑤ Gas	
⑤ 8 Bar gas main	✓
Assessed score	7

⑥ Sewer	
⑥-1 Pipe factory uses much sewer capacity	✗
Assessed score	3

⑦ Permit Readiness	
⑦-1 3 out of 6 necessary permits in place	?
Assessed score	5

⑧ Econ Developer Capability	
⑧-1 Inexperienced with large projects, but capable / driven	?
Assessed score	5

Site Name	①	②	③	Other sites in search
① Location Overview	3	7	7	
② Site Condition	5	1	5	
③ Power	7	7	7	
④ Water	1	9	9	
⑤ Gas	7	9	5	
⑥ Sewer	3	5	9	
⑦ Permit Readiness	5	3	5	
⑧ Econ Dev Capability	5	3	5	
Overall Score	3	5	7	
Verdict	Out	tbc	Keep	

Cost analysis of location-specific parameters

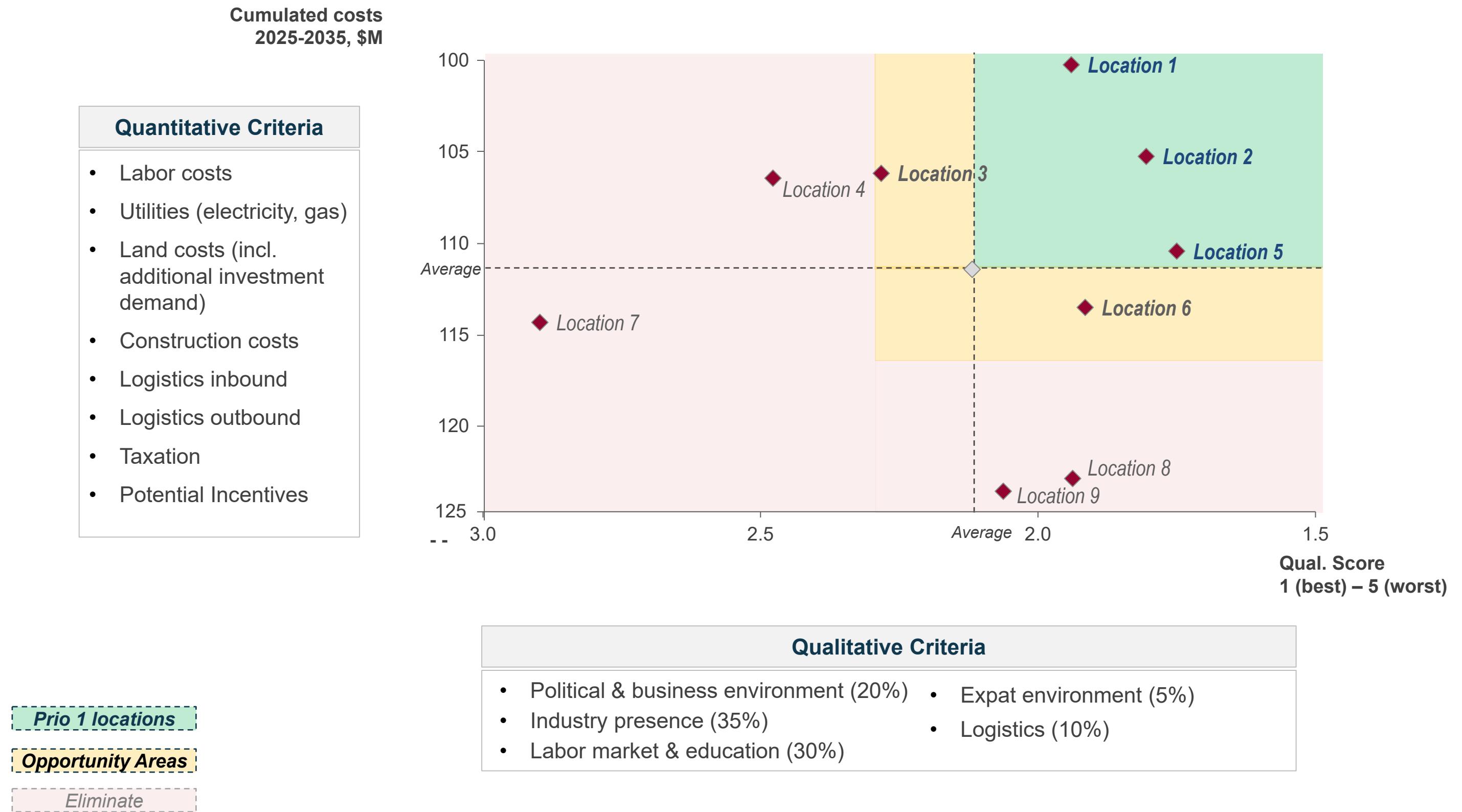
***Project investments and VAT impact**

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%	6%	6%	6%	6%	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)								

PROPERTY IMPROVEMENTS	Site #1	Site #2	Site #3	Site #4	Site #5	Site #6	Site #7	Site #8
Real Property Taxes								
Severe Top Grading								
Assessed Ratio %								
Utilities Upgrades								
Total								
Assessment Basis	Year 2023	100%	100%	159,921	159,921	159,921	75.0%	50.0%
	Year 2024	100%	100%	159,921	159,921	159,921	75.0%	50.0%
	Year 2025	100%	100%	159,921	159,921	159,921	75.0%	50.0%
	Year 2026	100%	100%	159,921	159,921	159,921	75.0%	50.0%
	Year 2027	100%	100%	159,921	159,921	159,921	75.0%	50.0%
	Year 2028	100%	100%	159,921	159,921	159,921	75.0%	50.0%
							50.0%	50.0%

COST & CONSTRUCTION MAT'L'S & SALES	Site #1	Site #2	Site #3	Site #4	Site #5	Site #6	Site #7	Site #8
12-YEAR NET PRESENT VALUE ANALYSIS								
AS WITHOUT INCENTIVES								
Cost								
Investments								
Property Purchase / Lease	€ 49,440,000	€ 24,720,000	€ 32,400,000	€ 27,600,000	€ 12,968,880	€ 19,080,000	€ 20,400,000	€ 20,400,000
Building Depreciation (phased in)	€ 175,464,062	€ 175,464,062	€ 224,502,053	€ 224,502,053	€ 224,502,053	€ 390,771,491	€ 244,040,627	€ 244,040,627
Building Construction Materials Sales Tax	€ 31,459,664	€ 42,264,478	€ 42,264,478	€ 46,289,667	€ 66,659,856	€ 45,942,786	€ 45,942,786	€ 45,942,786
M&E Depreciation (phased in)	€ 901,075,748	€ 901,075,748	€ 901,075,748	€ 901,075,748	€ 901,075,748	€ 901,075,748	€ 901,075,748	€ 901,075,748
M&E Sales Tax	€ 214,175,600	€ 214,175,600	€ 224,884,381	€ 224,884,381	€ 246,301,941	€ 203,466,820	€ 224,884,381	€ 224,884,381
Site Improvements	€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ -
TOTAL INVESTMENTS	€ 1,371,615,074	€ 1,346,895,074	€ 1,425,126,660	€ 1,420,326,660	€ 1,431,138,288	€ 1,580,953,916	€ 1,436,343,542	€ 1,436,343,542
Cost								
Recurring Costs								
Human Resources (HR)								
Wages - Direct	€ 179,927,881	€ 156,307,179	€ 269,665,523	€ 269,665,523	€ 208,422,168	€ 453,410,886	€ 205,116,965	€ 205,116,965
Wages - Indirect	€ 238,029,821	€ 206,783,511	€ 302,671,461	€ 302,671,461	€ 267,376,485	€ 344,200,610	€ 191,912,207	€ 191,912,207
Fringe Benefits	€ 108,477,441	€ 95,827,243	€ 181,408,172	€ 181,408,172	€ 127,067,066	€ 195,713,333	€ 195,129,357	€ 195,129,357
Human Resources	€ 526,435,143	€ 458,917,933	€ 753,745,156	€ 602,865,719	€ 993,324,828	€ 592,158,529	€ 592,158,529	€ 592,158,529
Cost Differential: Cost over Low	€ 67,517,210	€ -	€ 294,827,223	€ 294,827,223	€ 143,947,785	€ 534,406,895	€ 133,240,596	€ 133,240,596
14.7%	0.0%	64.2%	64.2%	31.4%	116.4%	29.0%	29.0%	29.0%
1.15	1.00	1.73	1.73	1.33	2.90	1.31	1.31	1.31
Total Investments	€ 26,577,590	€ 35,142,193	€ -	€ -	€ 150,884,866	€ 268,673,532	€ 100,146,715	€ 93,222,629
Cost								
Recurring Costs								
Utilities								
Electricity	€ 482,478,833	€ 482,478,833	€ 446,554,002	€ 446,554,002	€ 584,822,828	€ 677,684,338	€ 543,049,769	€ 543,049,769
Electricity - Sales Tax	€ 96,495,767	€ 96,495,767	€ 93,776,340	€ 93,776,340	€ 134,500,250	€ 128,760,024	€ 114,040,451	€ 114,040,451
N2	€ -	€ -	€ -	€ -	€ -	€ 67,655,197	€ 67,655,197	€ 67,655,197
N2 - Sales Tax	€ -	€ -	€ -	€ -	€ -	€ 1,071,207	€ 1,183,966	€ 1,183,966
Process Water	€ -	€ -	€ -	€ -	€ -	€ 19,208,109	€ 15,415,437	€ 9,120,813
Process Water - Sales Tax	€ -	€ -	€ -	€ -	€ -	€ 3,649,541	€ 1,541,544	€ 912,081
Wastewater	€ 4,715,382	€ 6,588,557	€ 8,392,515	€ 8,392,515	€ 1,297,812	€ 11,247,700	€ -	€ -
Wastewater - Sales Tax	€ 943,076	€ 1,317,711	€ 839,251	€ 839,251	€ 103,825	€ 2,137,063	€ -	€ -
Total Utilities	€ 669,317,238	€ 677,881,842	€ 642,739,648	€ 642,739,648	€ 793,624,514	€ 911,413,180	€ 742,886,363	€ 735,962,277
Cost Differential: Cost over Low	€ 26,577,590	€ 35,142,193	€ -	€ -	€ 150,884,866	€ 268,673,532	€ 100,146,715	€ 93,222,629
Taxes								
Real Property	€ 8,820,340	€ 14,700,567	€ 64,544,205	€ 64,544,205	€ 126,854,867	€ 49,839,327	€ 32,341,248	€ 32,341,248
Personal Property	€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ -
Corporate Income Tax	€ 160,896,744	€ 160,896,744	€ 305,703,814	€ 305,703,814	€ 305,703,814	€ 241,345,116	€ 391,430,289	€ 391,430,289
Local Business Tax	€ -	€ -	€ -	€ -	€ -	€ 190,903,987	€ 15,678,988	€ 15,678,988
Property Taxes	€ 169,717,084	€ 175,597,311	€ 370,248,019	€ 370,248,019	€ 432,558,681	€ 482,088,430	€ 439,450,525	€ 439,450,525
TOTAL RECURRING COSTS	€ 1,365,469,466	€ 1,312,397,086	€ 1,766,732,823	€ 1,766,732,823	€ 1,829,048,914	€ 2,386,826,439	€ 1,774,495,417	€ 1,767,571,330
TOTAL COSTS	€ 1,365,469,466	€ 1,312,397,086	€ 1,766,732,823	€ 1,766,732,823	€ 1,829,048,914	€ 2,386,826,439	€ 1,774,495,417	€ 1,767,571,330
TOTAL INVESTMENTS & COSTS (NPV)	€ 2,737,084,540	€ 2,659,292,160	€ 3,191,859,483	€ 3,187,059,483	€ 3,260,187,202	€ 3,967,780,354	€ 3,2	

Reconciliation: Optimizing Factors



Q&A

Thank You!

For More Information:



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