

Eli Lilly: How Much Capacity, and When?

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Decision scope: Governance of future manufacturing-capacity commitments

Case convention: This is an author-created strategic decision exercise. The management role and decision meeting are hypothetical; company and competitor announcements are historical. No private deliberations are represented.

The decision

On December 5, 2024, Eli Lilly and Company announced a \$3 billion expansion of a recently acquired manufacturing facility in Kenosha, Wisconsin. The planned scope included injectable manufacturing, device assembly and packaging across therapeutic areas; construction was expected to begin in 2025. Lilly said it had committed more than \$23 billion since 2020 to build, expand or acquire manufacturing sites worldwide. [S1]

Assume you are advising Lilly's senior leadership team on the policy for its **next increments** of manufacturing capacity. The question is not whether to reverse the Lebanon or Kenosha announcements. It is how to govern later commitments while projects already underway take years to build, qualify and ramp.

Assignment: Recommend a capacity policy: (1) continue prioritizing dedicated, owned capacity; (2) stage or modularize the next increments and use external capacity selectively; or (3) combine the approaches, dedicating capacity only where evidence identifies a persistent need while retaining options elsewhere. Specify the demand, launch, quality and execution evidence that would trigger each commitment. State what management must learn before making an irreversible decision.

Use only information available by December 5, 2024. No numerical threshold is provided by the research. If you propose one, label it as your own decision rule-not a Lilly target or a research-derived estimate.

A network being built for growth

Lilly's Q3 2024 Form 10-Q described two facts that can point in different directions. In prior periods, demand for incretin medicines had exceeded production. Management expected near-term U.S. tirzepatide supply to meet demand, while also saying that worldwide near-term sales growth generally depended on quantities produced and shipped. Local dose or presentation availability could still vary, and additional capacity would come online over several years. These are company statements about its outlook, not a public measure of patient demand or each production stage's capacity. [S2]

The projects already announced span different parts of the network. In May, Lilly raised its planned investment at Lebanon, Indiana, to \$9 billion, including an additional \$5.3 billion. It said

the site would produce tirzepatide active pharmaceutical ingredient (API), with medicine production expected toward the end of 2026 and scale-up through 2028. On December 5, Lilly announced the Kenosha expansion, whose stated scope includes injectables, devices and packaging across therapeutic areas. Neither release quantified saleable output, project-level spending schedules, ramp yields or returns. [S1, S3]

Lilly's 2023 Form 10-K said it used third parties for selected API, finishing and device work. It also described manufacturing changes as lengthy because of capital, process and regulatory qualification. [S6] Its Q3 2024 filing disclosed that executed contract-manufacturing and material-supply agreements could require up to approximately \$11.5 billion in purchases if minimum specified quantities were not met, primarily for incretins, over terms generally up to eight years. This is a maximum exposure under specified conditions, not a forecast loss or proof that external capacity is unusable. Lilly said available cash, operating cash flow and borrowing capacity were sufficient for existing and planned capital requirements. [S2]

Exhibit 1. Publicly announced capacity commitments

Announcement	Stated purpose and timing	What the announcement does not establish
Lebanon, Indiana - total planned investment of \$9 billion after a May 2024 increase	Lilly said the site would produce tirzepatide API; medicine production expected toward end-2026, with scale-up through 2028	API volume, project-level cash timing, qualification date, realized output, yields or returns
Kenosha, Wisconsin - \$3 billion expansion announced December 5, 2024	Injectable manufacturing, device assembly and packaging across therapeutic areas; construction planned to start in 2025	Product or line allocation, incremental capacity, commissioning/ramp schedule, project return
Lilly network - more than \$23 billion committed since 2020, per Lilly	Build, expand or acquire manufacturing sites worldwide	Cash already spent, comparable project scope, resulting saleable capacity or utilization

Sources: Lilly's May 24, 2024 Lebanon announcement and December 5, 2024 Kenosha announcement. Amounts and timelines are company-announced plans. They should not be added to derive a capacity or return estimate. [S1, S3]

Growth signals are not a demand forecast

In the third quarter, worldwide sales were \$3.113 billion for Mounjaro and \$1.258 billion for Zepbound, a simple sum of \$4.371 billion. Lilly attributed part of the U.S. sales effect to wholesaler inventory declines after higher inventory in the prior quarter, estimating a mid-single-digit effect on combined U.S. sales. Product sales are shipments affected by price, mix and channel inventory; they do not reveal prescriptions that could not be filled or underlying patient demand. The company also reported launching 2.5 mg and 5 mg vials through LillyDirect. [S2]

Regulatory supply status was unsettled. FDA said on October 2 that it had determined tirzepatide shortage was resolved based on manufacturer availability and capacity information. On October 22, FDA reported that litigation had remanded the determination for reevaluation. This dated snapshot does not establish continuous local or dose-level availability, nor does it establish that Lilly's capacity plan was right or wrong. [S4]

Exhibit 2. Signals leadership must interpret

Signal available by cutoff	Strategic relevance	Interpretation limit
Prior periods in which incretin demand exceeded production	A missed supply window could constrain growth and patient access	Historical shortfall does not quantify future demand or identify a bottleneck
Management expected near-term U.S. tirzepatide supply to meet demand; global near-term growth generally depended on production and shipments	Aggregate outlook can coexist with localized presentation or dose gaps	Forecast, not realized supply; no line-level or location-level data disclosed
Q3 Mounjaro and Zepbound worldwide sales totaled \$4.371 billion; Lilly attributed a mid-single-digit share of U.S. sales to channel inventory declines	Franchise scale raises the stakes of reliable supply	Shipment revenue is not patient demand; quarter-to-quarter channel changes complicate comparisons
Up to approximately \$11.5 billion of potential minimum-purchase exposure under specified contract conditions	External supply can carry obligations as well as flexibility	Maximum exposure, not expected payment; contract-level terms are not public
FDA's October 2 shortage resolution and October 22 litigation remand	Regulatory definitions and the public supply narrative can change	Dated regulatory events do not measure all presentations or local availability

Sources: Q3 2024 Form 10-Q and results release; FDA dated October 2 and October 22 updates. [S2, S4]

Competitors are investing too

On February 5, 2024, Novo Nordisk announced an agreement to acquire three fill-finish sites from Novo Holdings A/S, in connection with Novo Holdings' agreement to acquire Catalent. In June, Novo announced a \$4.1 billion expansion at Clayton, North Carolina, and forecast \$6.8 billion of production investment for 2024. These dated announcements show a rival's intended capacity actions; they do not establish completed output, market-share change or direct interchangeability with Lilly's network. [S5]

Competitor investment can increase the cost of waiting if demand outpaces qualified supply. It can also increase uncertainty about category capacity if multiple firms build against changing demand, product mix and access. The public evidence does not resolve which effect should dominate.

Two lenses from operations research

One pharmaceutical capacity-planning study models multiple production stages, inventories, product allocation and expansion choices under demand uncertainty. In one of its two industry-derived examples, launch timing and speed mattered more to expansion choices than eventual demand. A separate model of new pharmaceutical product introductions finds that flexible capacity can delay dedicated investment while uncertainty resolves, but that flexibility is finite and can be costly to reserve. These are model-based mechanisms, not estimates of Lilly's economics; neither identifies Lilly's bottleneck or a preferred capacity mix. [S7, S8]

The strategic alternatives

1. **Prioritize dedicated owned capacity.** Commit early where a persistent need appears likely, accepting more fixed investment and the risk that a long-lived asset is underused or mismatched to future products.
2. **Stage the next increments.** Preserve options with modular upgrades and selectively reserved external capacity; commit later when demand and execution evidence strengthens. This may reduce irreversible exposure but can leave too little qualified capacity if a gate comes too late.
3. **Adopt a portfolio of capacity options.** Combine dedicated internal capacity, staged increments and external sourcing in a mix selected by leadership. This spreads exposure across approaches while increasing coordination and allocation complexity.

Each is a policy choice for future decisions, not a claim that management has selected or scheduled one. External capacity is not automatically flexible: qualification, quality oversight, availability and minimum-purchase terms matter. “Modular” does not mean that every process or product can share equipment.

Discussion questions

1. What does the public record establish about Lilly's supply position-and what remains unknown? Distinguish demand, shipments, channel inventory, aggregate supply and local availability.
2. Which policy should leadership adopt for the next increments? What is the strongest evidence-based argument against your recommendation?
3. Which observable demand, launch, quality and construction milestones should trigger a new commitment, a pause or a switch among owned, staged and external capacity? Who should validate each measure?
4. How should the \$11.5 billion minimum-purchase exposure affect the policy? What contract information would change your view?
5. What should Lilly learn from Novo's dated announcements, and what cannot be inferred from them?

Sources and cutoff

The cutoff is December 5, 2024, 11:59 p.m. U.S. Eastern. Company plans are attributed as announcements or forecasts; events after the cutoff are excluded.

- **[S1]** Lilly, "Lilly announces \$3 billion expansion of its recently acquired manufacturing facility in Wisconsin," December 5, 2024. [Release](#)
- **[S2]** Lilly, Form 10-Q for quarter ended September 30, 2024, filed October 30, 2024, pp. 39, 45, 48. [SEC filing](#)
- **[S3]** Lilly, "Increases Manufacturing Investment to \$9 Billion at Newest Indiana Site," May 24, 2024. [Release PDF](#)
- **[S4]** FDA, "FDA clarifies policies for compounders as national GLP-1 supply begins to stabilize," dated October 2 and October 22, 2024 updates. [Notice](#)
- **[S5]** Novo Nordisk, February 5, 2024 announcement of an agreement to acquire three fill-finish sites from Novo Holdings A/S, and June 24 announcement of a \$4.1 billion U.S. manufacturing expansion. [February release](#); [June release](#)
- **[S6]** Lilly, Form 10-K for year ended December 31, 2023, filed February 21, 2024, Part I, Item 1 (manufacturing/supply and Quality Assurance, HTML lines 551-67), Item 1A (lines 783-97). [Filing](#)
- **[S7]** Lindahl, Simon B., Deenesh K. Babi, and Gürkan Sin, "Pharmaceutical capacity expansion under uncertainty: Framework and models," *Computers & Chemical Engineering* 189 (2024), 108808. [Version of record](#)
- **[S8]** Chambers, Chester G., Eli M. Snir, and Asad Ata, "The Use of Flexible Manufacturing Capacity in Pharmaceutical Product Introductions," *Decision Sciences* 40(2) (2009), 243-268. [Publisher article](#)

The MIT thesis and Bayer article evidence remain abstract-only, provisional and non-core; they are not used to support Lilly-specific economics.