The Factory That Learned to Think

Amyris, precision fermentation, and the industrial discipline of reliability

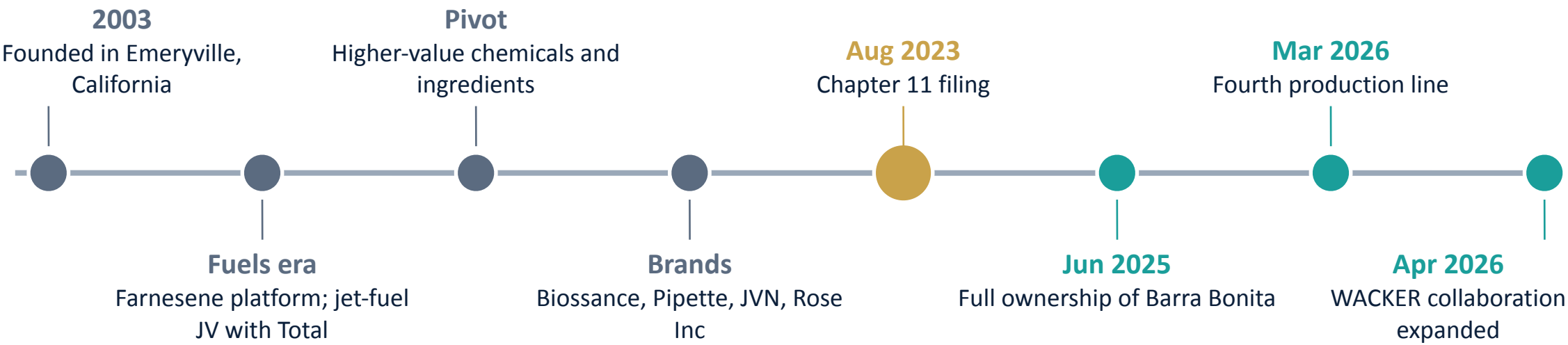
You can't control the market. Can you control the plant?

Based on Adam Blaziak's remarks at ABLC Next 2026, Industry Horizons Forum



Digest illustration · generic fermentation hall, not Amyris's plant

Amyris: The Second Act



FIRST ACT · platform, fuels, brands

SECOND ACT · the manufacturer

Source: ABLC 411 (ABLC_411-102126.pdf) pp. 20–21. Fuels, pivot and brands phases are shown in sequence without dates.

You Cannot Control the Market



Amyris can't set prices, demand or policy. It can decide how consistently and efficiently its plant runs.

WHAT CONSISTENCY BUYS

- Yield
- Purity
- Reliability
- Margin

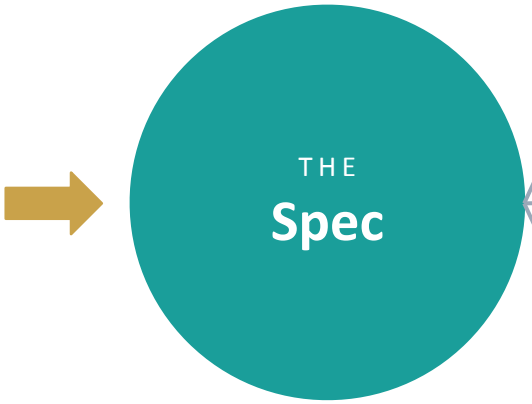
Thesis from Adam Blaziak, Amyris, remarks at ABLC Next 2026 (Industry Horizons Forum). Original Digest graphic.

Start with the Customer, Not the Molecule

THE CUSTOMER SPECIFIES

- **Performance**
- **Purity**
- **Price**
- **Reliable supply**

Example: squalane for cosmetics, replacing shark-liver and olive-derived supply



Strain
Yeast engineered to make the target molecule

Fermentation
Plant sugar converted at industrial scale

Purification
Recovery to the grade the customer requires

Sources: Adam Blaziak, Amyris, remarks at ABLC Next 2026 (Industry Horizons Forum); ABLC 411 (ABLC_411-102126.pdf) p. 20 (squalane, strain engineering, purification). Original Digest graphic.

Inside the Barra Bonita Manufacturing Engine



Jun 2025

Full ownership
Bought Ingredion's 31% stake in the RealSweet JV

Mar 2026

Fourth line
2 × 80 m³, with upgraded instrumentation, process control and automation

Always

Cane at the gate
Direct access to Brazilian cane sugar: a real cost advantage

Source: ABLC 411 (ABLC_411-102126.pdf) pp. 20–21. Map schematic. Background: generic Digest illustration, not the plant.

The Billion-Data-Point Factory

~1 billion

manufacturing data points gathered daily

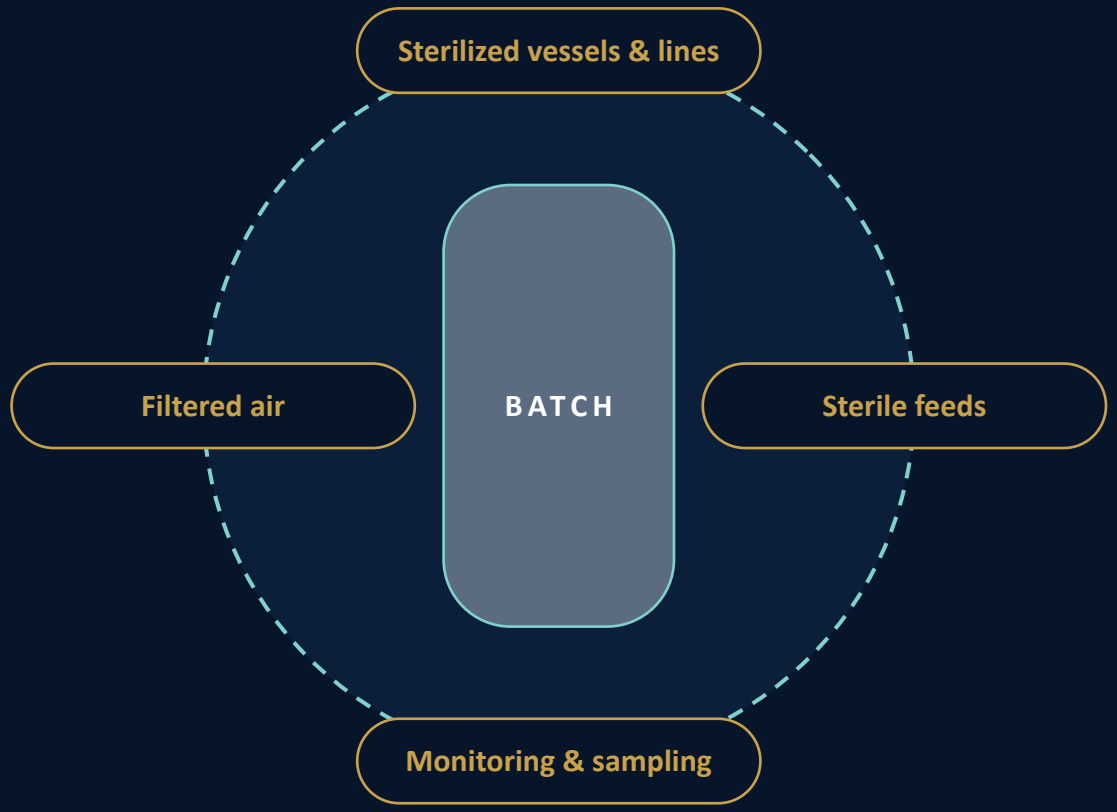
COMPANY-REPORTED

The industrial question: how do observations become better yields, purity, reliability and margins?



Figure: Adam Blaziak, Amyris, remarks at ABLC Next 2026 (Industry Horizons Forum). Schematic is a generic Digest illustration, not Amyris's system architecture.

The Invisible Enemy: Contamination



Microbes that aren't yours compete for your sugar.

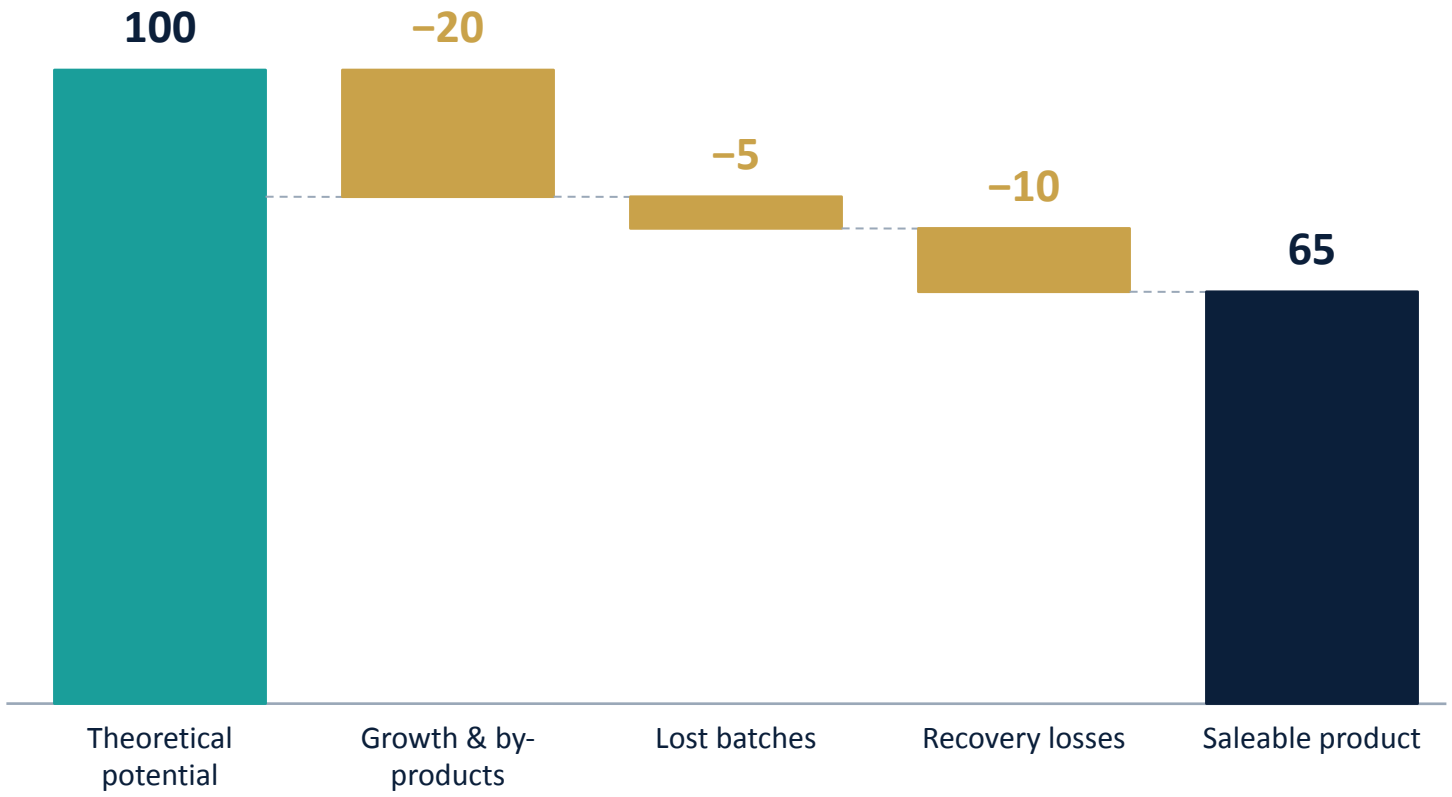
TWELVE ILLUSTRATIVE BATCHES



One lost batch forfeits its sugar, its tank time and its slot in the schedule. Reliability starts with sterility.

Context: Adam Blaziak, Amyris, remarks at ABLC Next 2026 (Industry Horizons Forum). Barriers reflect general fermentation practice, not Amyris procedures; batch strip is illustrative.

The Yield Is the Money



HYPOTHETICAL INDEX

Theoretical maximum product from the sugar fed = 100. All losses invented for illustration. Not Amyris data.

Halve the lost batches and saleable output rises from 65 to 67.5: about 4% more product from the same sugar and the same tanks.

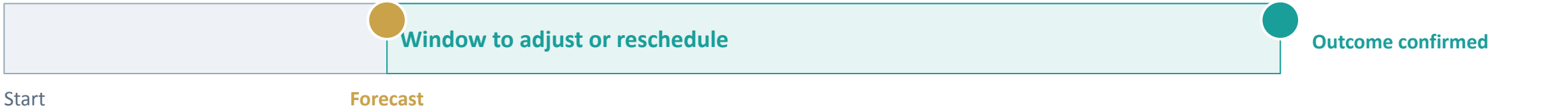
Illustrative mass balance with labeled assumptions. Original Digest graphic.

Predicting Tomorrow's Batch Today

WITHOUT PREDICTION



WITH PREDICTION

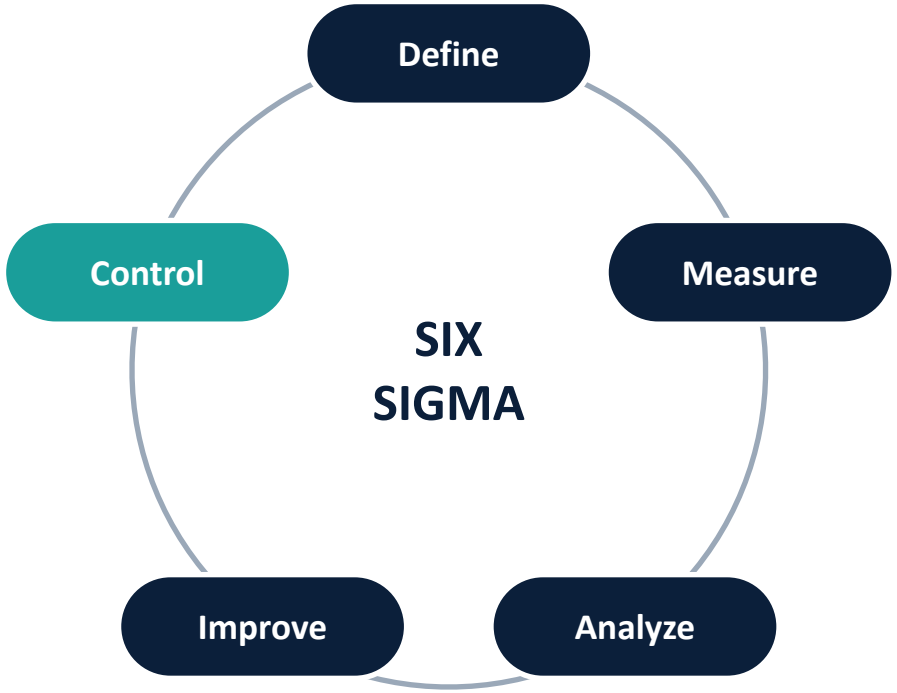


STATUS: UNDER DEVELOPMENT (COMPANY ACCOUNT)

A forecast pays only if someone can act on it in time.

Status: Adam Blaziak, Amyris, remarks at ABLC Next 2026 (Industry Horizons Forum). Concept diagram; forecast timing and window are illustrative.

The Discipline Behind the Intelligence



Before AI, statistics. Models can only learn from a process that is measured the same way every time.

Measure consistently Same methods, every batch

Separate signal from noise Act on real shifts, not routine variation

Lock in the gain Make improvements the new standard

Source: Adam Blaziak, Amyris, remarks at ABLC Next 2026 (Industry Horizons Forum) (Six Sigma, continuous improvement). DMAIC is the standard Six Sigma cycle.

AI Meets the Plant Operator

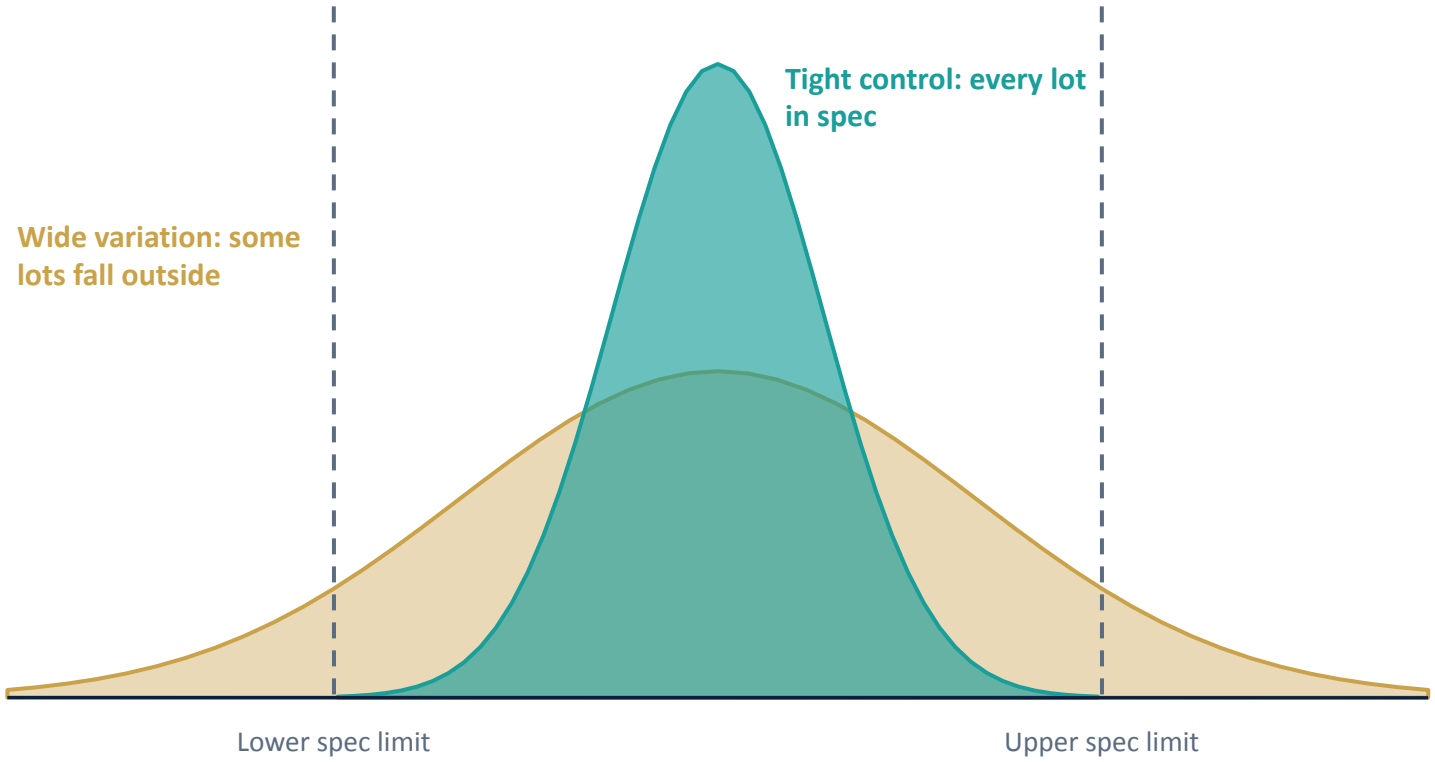
AI AUTONOMY →



Three different claims, not one: what is used today, what is being built, and what is hoped for.

Status per Adam Blaziak, Amyris, remarks at ABLC Next 2026 (Industry Horizons Forum). "Recommend" status was not specified in cleared sources. Original Digest framework.

Purity Is a Commercial Promise

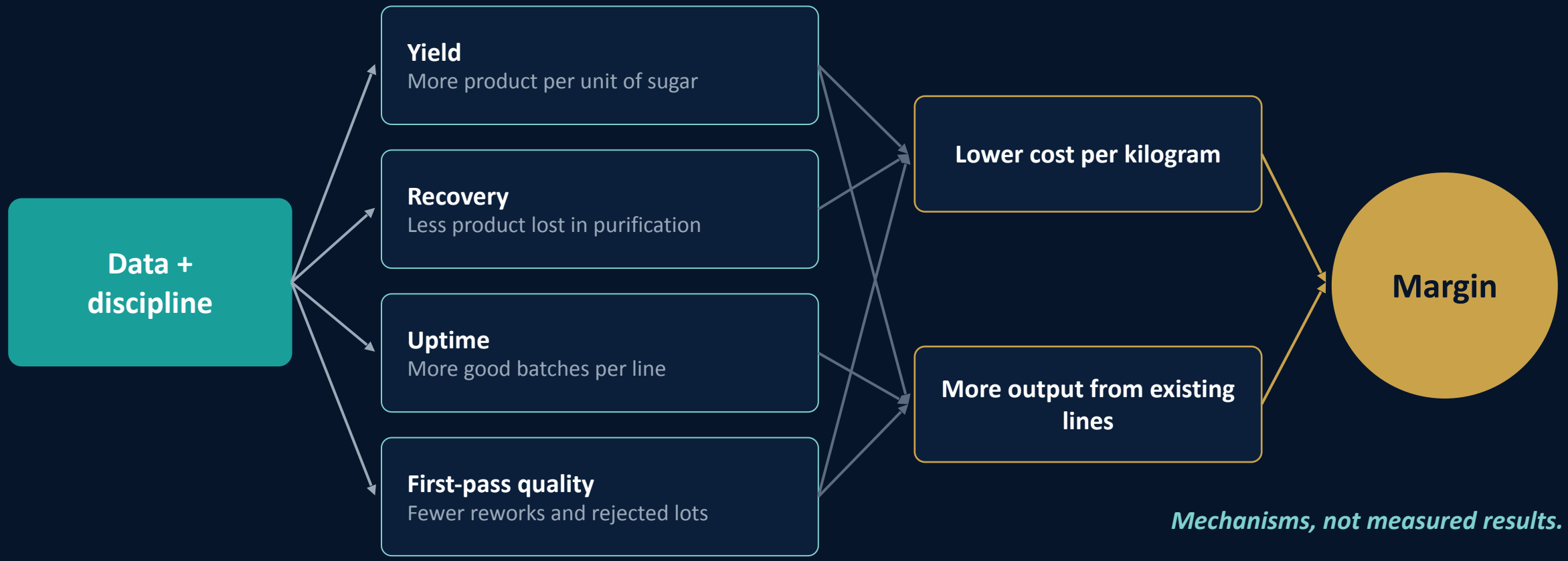


A specification is a promise made to a customer's quality lab.

- Out-of-spec lots mean rework, downgrade or rejection
- Customers test incoming material lot by lot
- Narrow variation is what earns repeat orders

Process-capability concept; curves and limits are illustrative, not Amyris specifications or data.

From Data to Dollars



Mechanisms, not measured results.

Context: Adam Blaziak, Amyris, remarks at ABLC Next 2026 (Industry Horizons Forum); ABLC 411 (ABLC_411-102126.pdf) p. 21. No Amyris margin or cost data disclosed in cleared sources.

What Still Needs to Be Proven?

DATA

~1 billion data points gathered daily

COMPANY-REPORTED

ANALYTICS

Data and analytics applied in plant operations

IN USE · COMPANY ACCOUNT

PREDICTION

Predictive applications for batch outcomes

UNDER DEVELOPMENT

CONTROL

AI-enabled process control

LONGER-TERM AMBITION

COST-DOWN

Savings from the automated fourth line

NOT YET PUBLICLY MEASURED

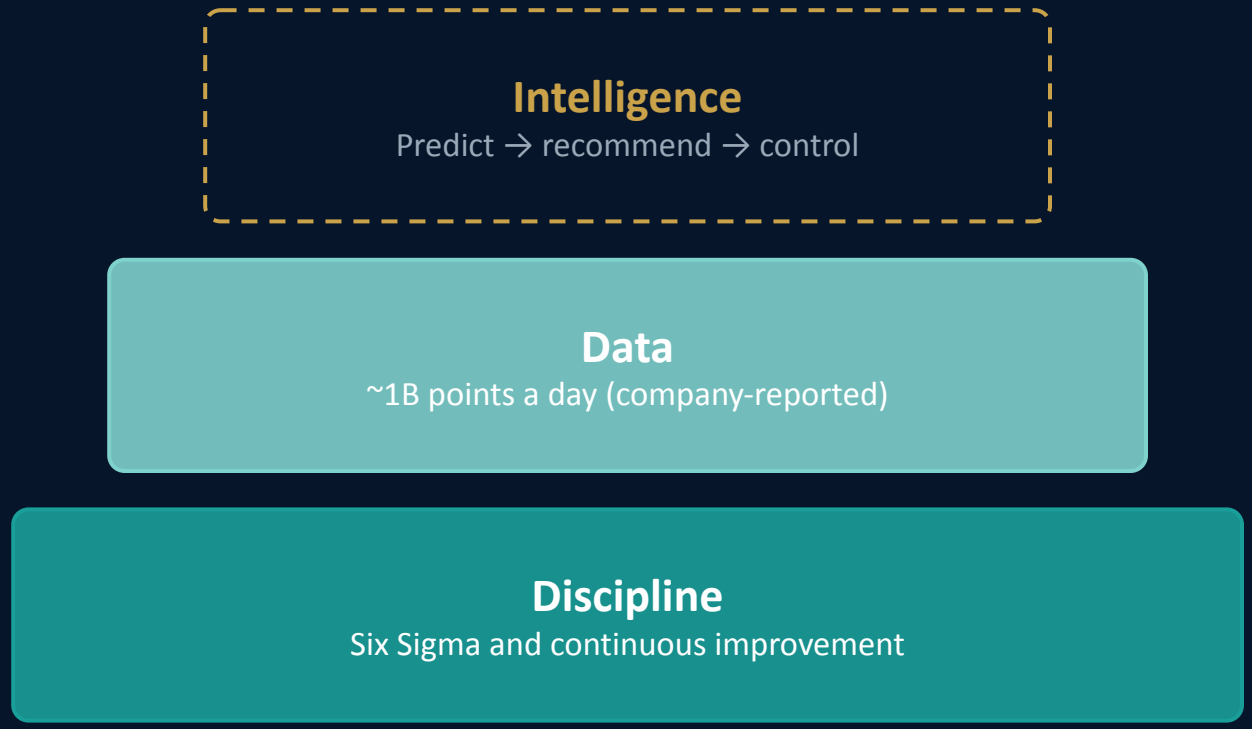
UTILIZATION

How fully the four lines are used

NOT DISCLOSED

Status: Adam Blaziak, Amyris, remarks at ABLC Next 2026 (Industry Horizons Forum); ABLC 411 (ABLC_411-102126.pdf) p. 21 ("What we're watching"). No ratings or scores assigned.

Reliability Is Strategy



Built on: an owned plant with cane sugar at the gate

From clever chemistry to dependable production

Amyris's edge is no longer only what its yeast can make, but how reliably its plant makes it. The data is being gathered; prediction is being built; autonomous control is still an ambition.

The proof will show up in margins, line utilization and repeat customers.

Digest editorial conclusion. Top layer dashed: not yet fully deployed.