Process Design Bridge™

Process Design Bridge™ is a LYSPAS & CO program designed to link **industrial process engineering** with **Continuous Improvement** Practices.

Its objective is to ensure that new equipment, production lines or complete facilities are conceived, designed and commissioned **from the perspective of operational efficiency, reliability and process stability**.

The program applies to:

- **Industrial companies in operation** that want to redesign critical processes.
- **Equipment and assembly suppliers** who need to ensure that their solutions respond to the real problems of customers.

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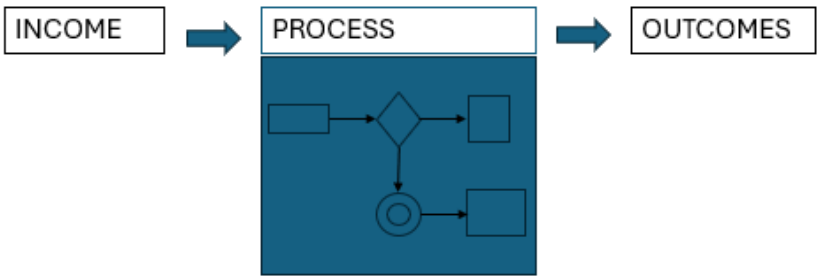
✓ What is it?

- A methodology that combines **process engineering**, **control of critical variables** and **lean tools**.
- A bridge between **real operational needs** and **viable technical solutions**.
- A collaborative process with a focus on **future operability** and **continuous optimization**.

✓ What it is NOT:

- A simple calculation of mass or energy balances.
- A theoretical design disconnected from operational reality.
- A basic or detailed engineering replacement: it is a **strategic complement** that ensures that this engineering has a real impact on the plant.



SUPPLIER	INCOMES	PROCESSO	OUTCOMES	CLIENTS
Process providers will help to have security about the necessary inputs that allow the solutions to be delivered to the end customer	The process needsclarity and detail in defining critical inputs, materials, and information needed to function.	This is where PROCESS DESIGN BRIDGE comes in to ensure that Continuous Improvement is present in the solutions from the moment of conception and according to what the CLIENT requests.	The proposed solution must be clearly measurable in order to satisfy the customer objectively.	It is very important to be sure about who the customer is and what their real needs are

PROCESS DESIGN BRIDGE

*Process Design Bridge™ ensures that every industrial engineering project becomes a **sustainable source of productivity**, and not a one-off expense.*

It's the most effective way to ensure that the teams and processes designed today continue to generate value in the future."

What problems does it solve?

- **Gap between engineering and operation**: projects fail because they are designed from the desk, without considering the real variability of the process.
- **Poorly prioritized investments**: expensive equipment that does not attack the true bottleneck.
- **Unstable processes**: Facilities that operate with constant manual adjustments due to a lack of well-designed control loops.
- **Lack of integration** between maintenance,

Proceeds

- More robust and stable **process designs** from the start.
- Reduction of **hidden costs** (rework, adjustments, unplanned stoppages).
- Generation of decision metrics when evaluating investments
- **Reduced start-up time for** new lines or equipment.
- Greater **alignment between suppliers and customers**, reducing engineering rework

Applications by Industry and Specific Focus

- **Oil industry**: design of rolling mills considering bean moisture variability and automatic speed adjustments.
- **Milling**: definition of critical points for measuring mill fineness and load to reduce downtime due to vibrations.
- **Biodiesel**: integration of temperature and pressure control loops in reactors to minimize deviations in conversion.
- **Equipment Suppliers**: Incorporating Predictive Control Logic into Grain Conveyors to Avoid Blockages or Overloads

At what point along the way is it recommended to implement it?

- **Conceptual design phase**: identification of critical variables, construction of SIPOC, definition of initial metrics.
- **Basic and detailed engineering phase**: integration of control loops, instrumentation definitions and measurement points.
- **Operation phase**: validation of actual vs. expected performance, adjustments and

What other products it relates to?

- **Flow Stable™** → to validate and stabilize the designed processes.
- **Auto OPS™** → to instrument and automate the control of critical variables.
- **Strat Bridge™** → to prioritize investments in the strategic plan.
- **Project Focus™** → to manage the implementation of design projects with discipline and focus.