MODULE 3

Conveyor Fundamentals and Component Anatomy

Conveyor Solutions Engineering | Professional Training Program
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SECTION 1: INTRODUCTION

There is a mental model that separates engineers who design systems that work in the real world from engineers who design systems that work on paper. It is not more knowledge of conveyor specifications. It is the ability to think like the package.

Before you select a conveyor type, before you open a spec sheet, before you draw a single line in AutoCAD, you should be able to close your eyes and trace the journey of a package through the system you are designing. Where does it enter? How does it need a larger or smaller gap? What does it experience at the transfer? What happens when the system asks it to stop? What happens when the system asks it to start again? How does its weight shift? What is underneath it and how does that surface behave under load and over time?

That practice - imagining you are the carton - is not a metaphor. It is a design methodology. It forces the engineer to think about the product's experience at every point in the system rather than just drawing lines that connect the entry to the exit. Every jam, every start and stop, every decision point, every sport for possible damaged products can be traced back to a moment in the design where the engineer stopped thinking about what the product was experiencing and started thinking only about what the conveyor was doing.

This module builds the foundation for that practice. It covers what conveyors are, how they are built, how they move product, and how they differ from one another in ways that matter profoundly in the field not just on spec sheets. It introduces the critical distinction between transportation and accumulation. It establishes why calculations give you a starting point, not a final answer. And it makes the case for big-picture systems thinking over narrow component knowledge.

SECTION 2: LEARNING OBJECTIVES

By the end of this module you will be able to:

1	Describe the fundamental components of a conveyor system and explain the function each component serves in moving product from one point to another.
2	Distinguish between transportation conveyors and accumulation conveyors, and explain why the distinction matters before any other selection decision is made.

3	Explain why conveyor calculations represent a theoretical baseline, not a guaranteed real-world result, and apply engineering judgment to account for the gap between calculation and reality.
4	Compare conveyors of the same category and explain why same-category conveyors can behave differently in practice - using electric zero-pressure and pneumatic zero-pressure as the primary example.
5	Apply the 'imagine you are the carton' framework to evaluate a proposed conveyor path and identify where the product's experience is likely to create problems.
6	Identify the maintenance reality of a customer's operation and explain how it should influence conveyor selection decisions.

SECTION 3: PREREQUISITES

Required Prior Knowledge

Module 1: The Warehouse Ecosystem and Customer Discovery. You need to understand the operational context a conveyor system lives within before studying the conveyors themselves.

Module 2: Product and Package Analysis. The Package Calcs outputs - belt width, roller centers, incline angle, speed - are the product analysis results that this module's conveyor fundamentals must be matched against.

No prior conveyor experience is required. This module builds from first principles.

SECTION 4: THE THREE W'S

The Three W's in this module apply to the fundamental principles and frameworks that all subsequent technology modules are built on. These are not conveyor types - those come in Module 4. These are the thinking tools that make all technology selection decisions defensible.

Calculations as a Starting Point, Not a Final Answer

WHY	Every calculation in this program produces a theoretical result. Real conveyors operate in real environments with real products that do not behave the way the formula assumes. Belt tension varies with temperature and wear. Packages do not always present their ideal surface to the conveyor. Air pressure in pneumatic systems fluctuates. The engineer who understands that calculations establish the baseline, not the ceiling, is the engineer who builds in the right tolerances, asks the right questions of manufacturers, and delivers systems that perform after installation.
WHEN	Every time you run a calculation and are about to use the output to make a design decision. Before you commit a number to a drawing or a quote, ask: what real-world conditions could push this number in a direction the formula did not account for? That question is where engineering judgment begins.

WHERE	This principle applies across the entire program and across every calculation you will ever run. It is introduced here because Module 3 is where students first encounter the relationship between calculated results and field performance. It belongs at the foundation of the curriculum and it should be revisited in every subsequent module.

Transportation vs. Accumulation

WHY	Transportation conveyors move product. Accumulation conveyors move product and hold it without damage while the downstream system catches up. These two functions look similar on a layout drawing and they are fundamentally different engineering problems. Selecting the wrong category - using a transportation conveyor where accumulation is needed - is one of the most common and most consequential mistakes in conveyor system design. Especially directly upstream (Where product is coming from) and directly downstream (Where product is going to) of a smart section of conveyor like a sorter or merge.
WHEN	The transportation versus accumulation decision must be made before any conveyor type is selected. It is the first question to answer once you have your product profile and your system layout. Every point in the system where a product may need to pause, queue, or wait for a downstream process is a point where accumulation must be considered.
WHERE	This framework lives in Module 3 and drives every technology selection decision in Module 4 and beyond. It is also the frame through which Module 5 accumulation design is taught. Students who internalize this distinction early make better technology selections throughout the program. Students who skip it tend to under-specify accumulation and over-specify transportation.

Big-Picture Systems Thinking

WHY	A conveyor does not exist in isolation. Every conveyor in a system is connected to something upstream and something downstream. Its speed, its behavior when full, its behavior when empty, and its response to product irregularities all affect the performance of every other conveyor it touches. An engineer who optimizes one conveyor without thinking about what happens at the interfaces is an engineer who builds beautiful components and poor systems. Systems thinking means designing the connection, not just the component.
WHEN	From the moment you receive a building layout to the moment the design is finalized. Every conveyor selection, every speed decision, every accumulation zone sizing must be evaluated in the context of the full system. What does this conveyor feed? What feeds this conveyor? What happens if it backs up? What happens if it runs dry? Those questions should always be in the engineer's mind.
WHERE	Systems thinking is the operating principle of the entire CSE program. It is introduced explicitly here because Module 3 is where students first work with individual components and the risk of component-level thinking is highest. It is reinforced in every module from here to Module 12.

SECTION 5: CORE CONTENT

5.1 Fundamental Conveyor Components

A conveyor system is built from a small number of fundamental components. Understanding what each component does and why it is designed the way it is gives you the ability to evaluate any conveyor on the market, not just the ones you have seen before.

Core Conveyor Components

Frame: The structural backbone of the conveyor. Channel frame (C-channel steel) is the most common for industrial applications. Frame width is determined by belt width, which is determined by the package analysis. Frame material and gauge must match the load requirements of the application.

Rollers: Cylindrical tubes on axles that support the product and, in roller conveyors, directly contact and move it. Roller diameter, material, and center spacing are driven by package weight and minimum package length. Typically spring-loaded axles allow quick removal and replacement without tools - a critical maintenance consideration.

Belt: In belt conveyors, the belt is the contact surface between the drive system and the product. Belt type - flat, cleated, rough top, smooth - affects product control. Belt tension must be managed over time as belts stretch.

Drive system: Motor, gearbox, and drive pulley or sprocket. Motor sizing is driven by load weight, belt speed, and system length. Variable frequency drives (VFDs) allow belt speed to be adjusted electronically - a significant advantage in systems where rate varies.

Special Call Out: some Types of conveyor required that they be started and stopped gently. This means a VFD is required.

Drive pulley and end pulley: The drive pulley is powered and moves the belt. The end pulley is unpowered and returns the belt. Pulley lagging (coating) affects belt grip and wear. Crown pulleys help keep belts centered on the frame.

Take-up system: The mechanism that maintains belt tension as the belt stretches over time. Fixed take-ups are simpler and lower cost. Gravity or screw take-ups provide adjustable tension. Belt tension affects drive efficiency, belt life, and product control.

Guards and safety covers: Pinch points, in-running nips, and rotating parts require guarding per OSHA standards. Guard design affects access for maintenance and cleaning. It is a system requirement, not an afterthought.

5.2 Transportation vs. Accumulation: One of the Most Important Distinction in Conveyor Design

If you take one framework from this module and use it for the rest of your career, this is the one. The distinction between transportation and accumulation is a functional requirement that every point in a conveyor system either does or does not have.

A transportation conveyor's job is to move product from point A to point B at a consistent speed. Product does not pause. Product does not queue. If something stops downstream, that entire unit must stop. Transportation conveyors are simpler, less expensive, and entirely appropriate when the downstream process is always ready to receive product at the rate the conveyor delivers it.

An accumulation conveyor's job is to move product from point A to point B as well, but it can also hold the product in one of its many zones, without damage, and typically without pressure, and in a controlled manner - when the downstream process is not ready. The accumulation zone absorbs the gap between the rate at which product arrives and the rate at which it can be processed. Without accumulation in the right places, the solution fails during minor downstream disruptions, and fails whenever anything in the system needs a brief pause.

Keep in mind that the selection of these units is not always binary. Often, a transportation conveyor must feed into an accumulation conveyor. In these cases, we need to clearly understand their relationship and ensure that the accumulation line is engineered properly so it does not cause the transportation unit to cycle on and off too often.

THE RULE OF ACCUMULATION

Any point in a system where product may need to wait - before an induction, before a merge, before a scan point, before a manual process, before a sorter, before a pack station, before a dock door - is a point where accumulation must be evaluated.

The question is not whether accumulation is needed at a given point. The question is how much and what type. That evaluation is the work of Module 5. The skill introduced here is recognizing the points in the first place.

The goal is that an engineer can think though a system layout and immediately identify every potential accumulation point - before they have even selected a single conveyor

5.3 Zero Pressure Accumulation: Same Name, Different Behavior

This is one of the most important practical lessons in the program. When a conveyor is described as zero pressure accumulation, that description tells you the intended function accumulate product without applying contact pressure between packages. It does not tell you how that function is achieved, how reliably it performs under varying conditions, or how the conveyor will behave with your specific product mix.

Two zero pressure accumulation conveyors from the same manufacturer using different mechanisms can behave in measurably different ways in the same application. The E24-EZ (motor-driven roller) conveyor is a common example of electric zero pressure accumulation. Each zone is driven by an independently controlled motorized roller. Zone stop and release commands are executed electrically and respond consistently regardless of ambient temperature, air supply pressure, or compressor performance.

The ABEZ conveyor is a common example of pneumatic zero pressure accumulation. Zone control is managed by air pressure acting on bladders that engage and disengage. The behavior of a pneumatic system depends on the stability and quality of the air supply. Air pressure that fluctuates - due to compressor cycling, demand spikes elsewhere in the facility, or leaks in the supply lines - produces zone behavior that is less consistent than an electric system. An ABEZ conveyor can typically stop packages slightly less quickly and less consistently than an E24 under the same load conditions, precisely because one system responds to an electrical signal and the other responds to air.

FIELD INSIGHT | MICHAEL COLLINS

Not all conveyors are created equal, even if they carry the same category name. Zero pressure accumulation is a function, not a specification. An E24-EZ and an ABEZ are both called ZPA conveyors, but one is electric and one relies on air, which can fluctuate. That difference matters when you are specifying a system that needs consistent zone-to-zone timing.

Before you select an accumulation conveyor, understand the mechanism. Ask the manufacturer: how does the zone stop? How does the zone release? What is the response time? How does that response time vary under different load conditions? Those are engineering questions. You should know the answers before you commit the conveyor to a drawing.

And do not be afraid to call the manufacturer directly during the design phase. Call the controls engineer too. Peer review is not a weakness. It is professional practice. The engineers who never ask for input are the engineers who are most surprised by field performance.

ZPA COMPARISON: ELECTRIC VS. PNEUMATIC

Characteristic	E24 (Motor-Driven Roller)	ABEZ (Pneumatic)
Drive mechanism	Motorized roller per zone	Pneumatic actuator per zone
Zone stop response	Electric signal - consistent	Air pressure - variable
External utilities required	Pri. 120/240/480 VAC Sec. 24 VDC	Pri. 120/240/480 VAC + Compressed air supply
Sensitivity to utilities	Low - stable electrical supply	Higher - air fluctuation affects timing
Maintenance profile	Motor replacement, roller bearings	Air fittings, bladders, filters, dryers
Appropriate environment	N/A	Keep air supply clean and dry

5.4 Imagine You Are the Carton

This is not a metaphor. It is a design framework, and it comes directly from Michael Collins's field practice. Before you finalize any conveyor path, trace the journey from the product's perspective. Ask every question the product would ask if it could.

THE CARTON'S JOURNEY: QUESTIONS TO ASK AT EVERY POINT

How am I entering this conveyor? Am I being transferred from another surface? Will I catch an edge? Is the speed differential at the transfer controlled so I do not lurch or tip?

What is underneath me? How many rollers are supporting me? Are they at the right centers for my length? What happens to my bottom surface if these rollers are spaced too far apart?

What is my weight distribution? Is my center of gravity centered, front-heavy, or side-heavy? How will I behave when the zone asks me to stop suddenly? Will I slide, rock, or tip?

What is the likeness of me interfering with another package

How am I being asked to stop? Is the zone stopping me with a controlled electric signal or with air pressure that may be slightly different from the last time? What's going on with the package behind me when I stop?

What happens at the curve? Is the curve wide enough?

What is the incline asking of me? Is my height-to-length ratio stable enough that I will not tip backward? Does my bottom surface have enough friction to prevent sliding at this belt speed and angle?

What happens to me if a zone stops functioning?

What happens if I stop moving unexpectedly?

That last question - who maintains this system - connects product experience to customer reality in a way that is easy to overlook in the engineering phase. A conveyor that requires constant maintenance is not a good fit for a customer whose maintenance team consists of one person doing reactive repairs. A conveyor that relies on a clean, dry, regulated air supply is not a good fit for a facility where the compressor air quality is inconsistent.

Matching the conveyor to the maintenance reality of the customer is as important as matching it to the product profile. A system that works perfectly at installation but degrades rapidly because no one maintains is an important consideration.

In the example of no maintenance, an MDR system may be a good choice. But it typically cost more.

5.5 Calculations Assume a Perfect World

Every formula in this program - belt speed, gap, roller centers, incline angle, curve geometry - produces a result based on idealized assumptions. The package is perfectly rigid, uniformly dense, and presented squarely to the conveyor surface. The belt is new, properly tensioned, and operating at exactly the commanded speed. The rollers are all present, all spinning freely, and spaced exactly as specified. The air pressure is stable and the temperature is controlled.

None of those conditions are guaranteed in a real installation. Belt tension changes as belts break in and stretch. Products arrive in varying orientations. Rollers wear. Air pressure fluctuates. Temperature affects belt stiffness and motor performance. The calculation gave you the right answer for a perfect world. Your job as an engineer is to apply judgment to determine how much margin that perfect-world answer needs before it becomes a reliable real-world specification.

HOW TO APPLY ENGINEERING JUDGMENT TO CALCULATIONS

Run the calculation. Understand every input and every output. Know what the number means and where it came from.

Ask what assumptions the formula makes and whether those assumptions hold in this specific application. A belt speed calculation that assumes clean, flat-bottomed cartons may not hold for a mix that includes Totes that are more prone to slippage, or polybags that contour to the rollers.

Build in margin. How much margin depends on how well-controlled the environment is, how consistent the product is, and how critical the calculation output is to system performance. There is no universal answer. Judgment determines the margin!

Verify with the manufacturer. Call the conveyor manufacturer with the specific application and ask whether the calculated specification is appropriate or whether they would recommend adjusting it. That call takes fifteen minutes and can prevent a field problem.

Verify with a controls engineer on complex systems. The controls engineer will tell you whether the zone timing and release logic you have specified is achievable with the hardware you have selected. Do not assume it is. Ask.

Document your assumptions. When a system does not perform exactly as calculated, your documentation tells you which assumptions proved incorrect and guides the adjustment.

5.6 Ask the Expert: Peer Review and Manufacturer Engagement

There is a professional norm in this industry that causes more problems than almost anything else. Engineers, especially newer ones, feel that asking questions signals a lack of competence. The opposite is true. The most experienced solutions engineers in this industry make manufacturer calls, pull in controls expertise, and ask peer review questions as a standard part of every significant design. It is not a sign that they do not know the answer. It is a sign that they understand the cost of getting it wrong.

When to Call and Who to Call

Call the conveyor manufacturer when: you are specifying a product type that is outside the normal application range for that conveyor, the load or speed requirements are near the upper limit of the specification, the environment is unusual (temperature extremes, moisture, chemicals, high particulate), or you have a question about zone timing, back-pressure limits, or interface behavior that the spec sheet does not clearly answer.

Call the controls engineer when: you are designing an accumulation system and need to verify that the zone release logic is achievable. Double check with them that the length of your scan belts or scales are appropriate.

Ask a peer when: you are making a technology selection you have not made in this context before, you are working with a product type you have not handled before, or you are about to commit a design decision that is difficult to reverse and you want a second perspective.

The rule: a fifteen-minute call to the right person before the design is finalized is with the time, every time

Make the call.

SECTION 6: TIPS AND TRICKS

TIPS AND TRICKS | MICHAEL COLLINS

Always ask the customer about their maintenance capability early in the discovery process. Not just whether they have a maintenance team, but what that team actually does. A facility that does reactive repairs only is a facility that needs a simpler, more durable conveyor than one with a proactive PM program. Match the conveyor to the maintenance reality, not just the product profile.

When you are unsure whether a location needs transportation or accumulation, default to accumulation. You can always run an accumulation conveyor in continuous mode. You typically cannot add accumulation capability to a transportation conveyor after it is installed.

The carton exercise is not optional on complex systems. Before you finalize any layout with more than four or five conveyor sections connected, walk through the full product journey at least twice - once for the smallest package and once for the largest. What you find will surprise you at least once.

On some conveyors, Zero pressure does not always mean zero force. For example, the TGW NBC conveyor allows products to touch, this constant momentary touching can lead to products being pushed through zones.

Just out of curiosity, what is the failure case if a package did touch or impact another or get pushed out of a zone into another, or onto a different conveyor???

What is the result of that failure?

Just because a calculation works does not mean the design is a best practice. The calculation tells you what is possible. Experience and systems thinking tell you what is appropriate for this customer, this product, this environment, and this maintenance reality.

Speed is always tempting to push higher because it solves throughput problems on paper. But speed affects gap maintenance, scan reliability, transfer behavior, and incline performance in ways that calculations do not fully capture.

Ask: what is the real-world consequence of running this system ten percent faster than the calculated target? Then design to that answer, not just to the number.

SECTION 7: NOTES AND INSIGHTS

NOTES AND INSIGHTS

The Total Guide to Warehouse Automation makes an important point about the four walls of a warehouse: operational efficiency is lost if you pick faster but cannot pack and ship at the same rate. The same principle applies within a conveyor system. A transportation conveyor running at peak speed into an uncontrolled merge point creates jams that eliminate the throughput advantage the speed was meant to deliver. Systems thinking prevents that trap.

The Mecalux Technical Warehouse Manual identifies the management system - WMS and ERP - as a fundamental element that influences the effectiveness of everything else in the facility. The same is true of the controls system for a conveyor. The conveyors are the hardware. The controls are what make them behave as a system rather than as individual machines. Module 3 introduces the hardware. Module 9 covers the controls. Both must be understood together.

Pneumatic conveyor systems have been deployed effectively for decades and remain appropriate in many applications. The point of the E24 versus ABEZ comparison is not that one is good and one is bad. It is that the engineer must understand the mechanism, not just the category name, before specifying a system. The right conveyor for a given application depends on the air infrastructure, the maintenance capability, the product sensitivity, and the throughput requirements - not on the category label.

The imagine you are the carton framework applies equally to totes, polybags, and any other product type in the mix. For each non-standard product type, run the mental journey independently. The answers will be different and the differences will reveal the handling requirements that standard carton-based design would miss.

SECTION 8: EXPERT CALLOUT

EXPERT CALLOUT

Placeholder for expert insight on the gap between conveyor calculations and real-world system performance. Reviewer to share a specific example of a system that calculated correctly but performed differently in the field, what the root cause was, and what engineering judgment would have caught it during the design phase.

[Reviewer Name, Title, Company]

SECTION 9: PITFALLS

! Treating calculation outputs as guaranteed performance. Every calculation assumes ideal conditions. Real systems operate in real environments. Build in margin, verify with manufacturers, and document your assumptions. A calculation that works on paper and fails in the field is an assumption that was not examined.

! Confusing a conveyor category with a conveyor specification. Zero pressure accumulation is a function, not a product. Two ZPA conveyors from the same manufacturer can behave differently in the same application because they achieve the same function through different mechanisms. Know the mechanism before you specify the conveyor.

! Skipping the transportation versus accumulation analysis. If you are not explicitly asking whether every connection point in the system needs accumulation, you are designing by assumption. The cost of adding accumulation after installation is always higher than the cost of specifying it correctly the first time.

! Designing a conveyor path without tracing the product's experience through it. The jams, and transfer failures that show up after installation are almost always visible during the design phase if the engineer traces the product journey at the right detail level. The carton exercise finds problems that AutoCAD does not.

! Matching the conveyor to the product without considering the maintenance reality. A conveyor that is optimal for the product profile but not maintainable by the customer's team is a conveyor that will degrade quickly and generate service calls. Ask about maintenance capability in the discovery phase and let the answer influence the selection.
Another consideration is maintenance access, if you have two side by side units, can you even get a wrench in there? Can you remove a motor or shaft if needed, is there room to replace a component? You need to understand this.

! Not asking for help when the application is outside your experience. Every experienced solutions engineer has a network they use. Manufacturer application engineers, controls engineers, and peers who have solved similar problems are resources that improve every design. Using them is professional practice. Avoiding them because it feels like admitting ignorance is how engineers get surprised after installation.

SECTION 10: FOREST THROUGH THE TREES

How Conveyor Fundamentals Connect to Everything That Follows

Module 3 is the conceptual foundation for Modules 4 through 8. Every technology selection, every system design decision, every rate calculation that follows is built on what is introduced here.

Module 4 applies the transportation versus accumulation framework to specific conveyor types and uses the EZ naming convention to teach technology selection. You cannot make good selections in Module 4 without the framework from Module 3. Module 5 builds accumulation system design on the zone behavior and concepts introduced here. Module 6 applies the perfect-world caveat to every rate and speed calculation - the numbers the calculator produces are the baseline; this module's engineering judgment principles are what make those numbers reliable in the field.

The “Imagine you are the carton” framework runs through Modules 7 and 8 when system layout and transfer design are taught. The maintenance reality consideration introduced here becomes a specific selection factor in Module 4 and a system design input in Module 11 when the solution is scoped and quoted. The call the manufacturer principle is applied in every module where a specific technology requires a manufacturer-specific specification.

The students who internalize Module 3 deeply are the ones who do not get caught by field surprises. They have already asked the right questions during design. The students who treat Module 3 as background reading are the ones who are still learning these lessons on real projects with real customers watching.

SECTION 11: KEY TAKEAWAYS

KEY TAKEAWAYS | MODULE 3

Every conveyor calculation assumes a perfect world. Your job is to apply engineering judgment to determine what margin and what verification the real world requires before that calculation becomes a reliable design specification.

Transportation and accumulation are not conveyor types. They are functional requirements. Every connection point in a system is either a transportation point or a potential accumulation point, and that determination must be made explicitly before any technology is selected.

Same category name does not mean same behavior. Two zero pressure accumulation conveyors using different mechanisms - electric and pneumatic - will perform differently under the same conditions. Know the mechanism before you specify the conveyor.

Imagine you are the carton. Trace the product's experience at every point in the system before you finalize the design. The problems you find during that exercise are cheaper to fix than the problems you find after installation.

Match the conveyor to the maintenance reality of the customer, not just the product profile. A conveyor that works perfectly but degrades because no one maintains it is a delayed failure.

Big-picture systems thinking means every component decision is evaluated in the context of what it is connected to upstream and downstream. A conveyor that is optimal in isolation but creates problems at its interfaces is not a good design.

Ask for help. Call the manufacturer. Call the controls engineer. Ask a peer. Fifteen minutes of the right conversation before the design is finalized is worth far more than troubleshooting after go-live.

SECTION 12: MODULE ASSESSMENT

Knowledge Check

Q1

What is the difference between a transportation conveyor and an accumulation conveyor? Give two specific examples of points in a warehouse system where accumulation must be considered and explain why.

Q2

Explain why two conveyors of the same category can behave differently in practice. Use the E24-EZ and ABEZ as examples and identify the specific real-world variable that causes their performance to differ.

Q3

What does it mean that conveyor calculations assume a perfect world? List three real-world conditions that can cause actual system performance to deviate from a calculated result, and describe how engineering judgment addresses each one.

Framework Exercise

Q1

Apply the 'imagine you are the carton' framework to the following scenario: A standard 20L x 10W x 20H carton weighing 8 lbs enters a 18” BF conveyor system at an induction belt running at 100 FPM. It transfers to a zero pressure accumulation section, travels through a 90-degree curve with an 32.5-inch inside radius, then travels up a 20-degree incline to a mezzanine level. Trace the product's experience at each of the four points - induction transfer, accumulation zone stop, curve, and incline --and identify one potential problem at each point that the product profile and layout would generate.

Scenario Question

Q1

A customer asks you to specify the conveyor for a zone accumulation system in their pick-to-pack operation. Their facility has a shared air compressor that also serves their production equipment, and their maintenance program is entirely reactive - they fix things when they break. Their product mix is standard rigid cartons ranging from 8 to 20 inches in length and 2 to 18 lbs. They run two shifts. What conveyor mechanism do you recommend and why? What questions do you ask about their air infrastructure? How does their maintenance reality factor into your recommendation? What would change your answer?

END OF MODULE 3

Next: Module 4 | Conveyor Types and Technology Selection

Before continuing, complete the framework exercise in writing. The carton journey exercise is a skill that must be practiced, not just read about.

Module 4 builds directly on the transportation versus accumulation framework from this module. Make sure that framework is solid before moving forward.

The maintenance reality question from the scenario will reappear in Module 4 and Module 11. Keep your answer to that question accessible.