



# New Research: Evaluating and Implementing New Conveyor Systems



*The Gentle Way to Convey®*

Research created in partnership with Ascend2

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# Introduction

The food processing industry continues to experience significant growth and to handle that growth, organizations are spending more time evaluating existing conveyor systems, determining the need for new systems, and selecting the best system for their specific needs.

This independent research study quantifies the food conveyor selection process by asking 290 professionals in the food processing industry to provide their insight on critical considerations when evaluating a system.

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The systems evaluated were:

- **Aero Mechanical Conveyors**
- **Bucket Elevators**
- **Cable Conveyors**
- **Pneumatic Conveyors**
- **Round-Link Chain Conveyors**
- **Screw Augers**
- **Pneumatic Conveyors**

## Four critical considerations were:

1.

### **Product Integrity:**

Maintaining the integrity and homogeneity of materials is critical in the conveying process, and some systems aren't up for the challenge.

2.

### **Facility Requirements:**

Certain types of conveying systems can't accommodate some workspaces and facility requirements.

3.

### **Maintenance and Downtime:**

A system that requires frequent maintenance and part replacements will affect production throughput and cost operation.

4.

### **Energy and Efficiency:**

The size of the motor and the amount of horsepower required to run a conveying system can have a major impact on production costs.

What products are you moving? The following research is especially relevant for those moving coffee, nuts, snack foods, pet foods, breakfast cereal, seeds, beans, frozen food, and powders.

We hope that research is helpful to you and your team as you make decisions and develop plans in the months ahead.

# Key Takeaways



Budgets are trending upward for conveying equipment and maintenance in the year ahead with **82% of those surveyed reporting their budgets will be increasing in the next 12 months.**



**67% of those surveyed report that they will be updating or replacing components of their conveying system(s)** and for 32% of this group, the timeline for this type of update will be in the next year. For another 42% the timeline will be in the next 2 years.



Cable conveyors are rated the best type of conveyor for the following:

- **Maintaining the integrity and homogeneity of materials**
- **Best able to accommodate workspaces and facility requirements**
- **Most efficient regarding maintenance and downtime**
- **Most energy-efficient**



Energy and efficiency is a top consideration that **60% of those surveyed feel is extremely important when evaluating a new system.**



High-growth companies (those reporting 20% or more revenue growth in the coming year) value customer service more than those with less growth. **73% of high-growth companies say customer service is extremely important** versus 56% of companies with less growth.

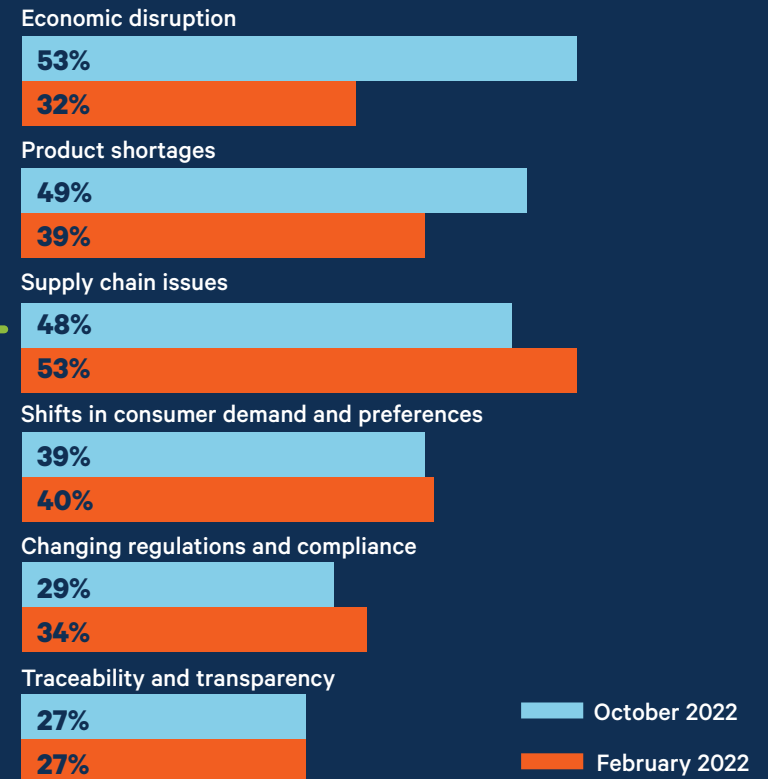
## 1.0 The State of the Industry

# Top Challenges Facing Food Processing

Over half (53%) of those surveyed report that economic disruption is a top challenge facing the food processing industry and another 49% report that product shortages threaten the industry as a whole. Notably, these current challenges have become more prevalent in the last year. Reports of economic disruption are up 66% from a study conducted in February of this year while reports of product shortages have seen a 25% increase from February.

**Issues relating to the supply chain have seen a slight decrease since this previous study but still remain among the top challenges facing the industry according to 48% of those surveyed.**

## What do you consider to be the top challenges facing the food and beverage processing industry?



## Inside the Numbers: High-Growth Companies

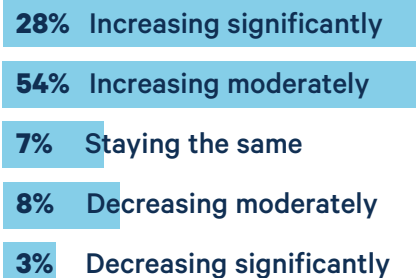
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## 1.1 The State of the Industry

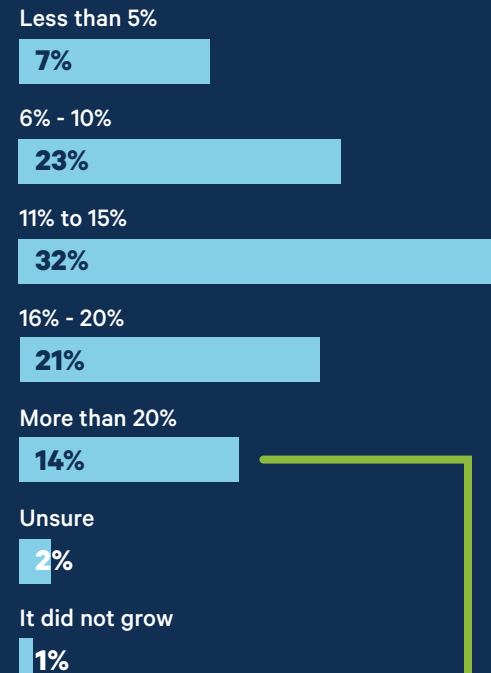
# Budgets and Business Growth

Budgets are increasing for conveying equipment and maintenance in the year ahead. 82% of those surveyed report their budgets will increase in the next 12 months with 28% describing this increase as significant.

### How is your budget for conveying equipment and maintenance changing in the next 12 months?



### By approximately how much did your business grow in the past year?



## \$ Budget Growth of U.S. vs. U.K. Companies

U.S. companies are experiencing more budget growth than in the U.K. This is both in significant budget growth (32% U.S. vs. 18% U.K.) and budget decrease (U.S. 6% vs. U.K. 23%). The U.K. has various distinctions in our research data, including budget, challenges, priorities, and overall conveying selection process. If a specific U.K. data point is not highlighted in this report, feel free to contact the Cablevey team to get the information that you need.



## Inside the Numbers: High-Growth Companies

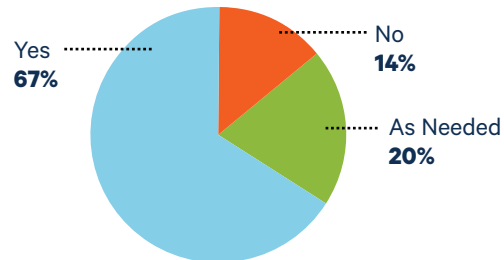
14% of those surveyed report business growth of more than 20% in the past year. Throughout the report that follows, you will see references to this group as we look into the preferences and insights from these “high growth” businesses.

## 2.0 Updating Conveyor Systems

# Current Situation & Timeline

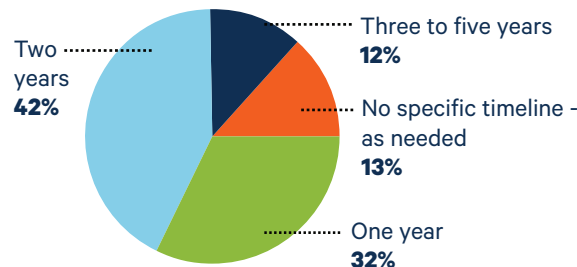
With budgets on the rise, many organizations will be looking to update their conveyor systems. In fact, 67% of those surveyed report that they will be updating or replacing one or more components of their conveying system(s) and for 32% of this group, the timeline for this type of update will be in the next year. For another 42%, the timeline will be in the next 2 years.

**Are you currently planning to update or replace any part of your conveying system(s)?**



**What is your typical timeline to plan for this type of expense?**

(Those who are currently planning to update or replace conveying systems)



**As you plan to update or replace your food conveyor system, prepare a list of questions to ask a prospective provider. Here is a list to get you started.**

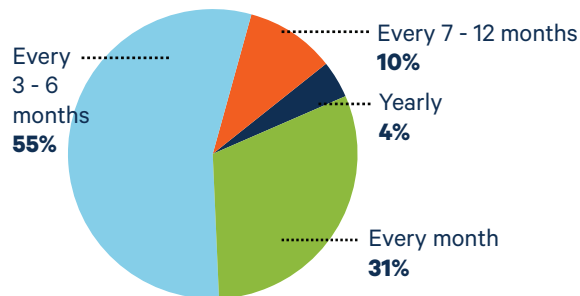
- What are the steps to managing an optimal layout for your conveyor?
- How do you compare with similar conveyors for energy usage?
- How do I contact you if I have difficulty during a self install? On the weekend?
- How much time does it take to clean your system?
- How can I tell if your conveyor is clean to the standard used in our facility?
- Will we have a dedicated account rep available to us? What days? What hours?
- Can we test our materials in your system before we buy one?
- How do we prevent downtime?
- Do you offer an ongoing maintenance agreement?
- Are replacement parts easily available? How long does it take for you to ship them once ordered?

## 2.1 Updating Conveyor Systems

# Evaluation & Implementation

What does the process of evaluating and implementing new conveying systems look like according to those in the food processing industry? 55% of those surveyed say that they evaluate the performance of their conveying systems every 3 - 6 months. Another 31% perform evaluations monthly.

**How frequently do you evaluate the performance of your conveying system(s)?**



### Inside the Numbers: High-Growth Companies

Companies that experienced the most growth last year evaluate the performance of their conveying systems more frequently than all others. 43% of this group evaluate their systems each month.

37% of those surveyed would consider their organization's approach to evaluating, maintaining, and replacing their conveying systems as "long term" or approximately from 1 to 5 years. About the same number of respondents (40%) said their organization's approach is "short term" or less than one year out.

## Developing a Plan

41% of respondents report using in-house staff to develop this plan while 28% say they use a third-party vendor and 32% use a combination of both.

## What critical elements should be in your plan? Here are a few:

- How to make efficient use of your existing space.
- How to conserve energy.
- How to simplify maintenance to ease labor costs.
- How to cut waste by preserving product integrity.
- How to avoid cross-contamination and environmental dust problems.

## Design and Purchase

Over half (54%) of those surveyed say that when it comes to designing and purchasing a new conveying system, they require complete assistance from a vendor or third party. Only 4% say they require no assistance during this process.



## 3.0 Essential Qualities of Conveyor Systems

# Choosing the Right Conveyor System

Choosing the right conveyor system can be a difficult task. Making the wrong decision could cost you in terms of money, time, and efficiency.

**When evaluating new systems, what are the most important features to consider?**



### Energy & Efficiency

Energy and efficiency is a consideration that 60% of those surveyed feel is extremely important when selecting a new conveying system.

**Questions to Ask:**

- How much energy will this system use?
- Is there a high or a low cut-off point at which this system becomes inefficient?



### Product Integrity

Product integrity is a consideration that 55% of those surveyed feel is extremely important when evaluating a new system.

**Questions to Ask:**

- Will the system maximize hygiene levels while minimizing downtime?
- Will the system gently convey your products to avoid material breakage and product loss?



### Maintenance & Downtime

Maintenance and downtime are also considered to be extremely important to 55% of those surveyed as they evaluate new conveyor system options.

**Questions to Ask:**

- How much time will be spent disassembling and cleaning the system?
- Will maintenance and downtime costs exceed any savings that you realized when purchasing the system?



### Facility Optimization

Facility requirements are considered extremely important to 51% of those surveyed when selecting a new system.

**Questions to Ask:**

- Do you have enough floor space or ceiling height to accommodate certain conveyor types?
- Does the layout of the conveying system take into account easy access for cleaning and maintenance, worker safety, and operational performance?



### Price

Product integrity, energy efficiency, and maintenance/downtime were rated more important than price for those surveyed. 51% of participants consider price to be extremely important.

**Questions to Ask:**

- What is the upfront cost as well as long-term cost of maintenance?
- What are the long-term costs (or savings) of wastage and breakage of valuable materials?

## Executive Perspective

Executive management is significantly more likely to feel that product integrity, energy and efficiency, and maintenance and downtime are extremely important when considering new conveying equipment than engineers. More than two-thirds (67%) of those in production management roles feel that energy and efficiency are extremely important considerations as they select new conveying systems.

## Number of Conveyors

Top considerations vary by the number of conveyors a facility has.

### 1 - 5 conveying systems:

- 98% of those with 1 - 5 conveying systems consider facility requirements important when selecting a new system.
- 97% of those with 1 - 5 conveying systems consider price to be important when selecting a new conveying system.

### 6 - 25 conveying systems

- 93% of those with 6 - 25 conveying systems consider product integrity important when selecting a new system.

### More than 25 conveying systems

- 96% of those with more than 25 conveying systems consider energy and efficiency important when selecting a new system.



## Test Your Product Before You Purchase

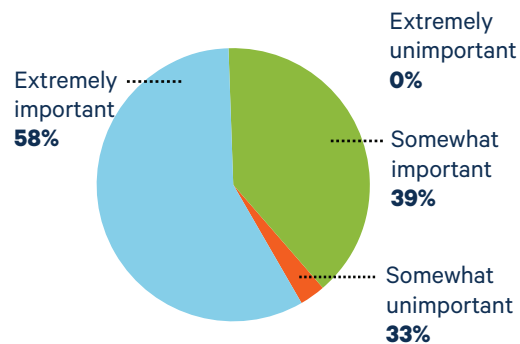
Before you purchase a new conveying system, you should test your product on that system. Testing can confirm whether that system will meet your expectations for product integrity, energy efficiency, facility layout requirements, and more. The Cablevey Testing Center has performed thousands of free tests on products and provides detailed analysis to help you make the best decision for your specific needs. [Learn more.](#)

### 3.1 Essential Qualities of Conveyor Systems

## Customer Service

97% of those surveyed report that they customer service they receive from a supplier is important to some extent.

**How important to you is the customer service that you receive from a supplier?**



### Inside the Numbers: High-Growth Companies

Customer service is considered to be extremely important to nearly three-quarters (73%) of those working for companies experiencing significant growth. Compare this to just over half (55%) of companies experiencing less growth.

**Production managers feel the most strongly about this with 64% rating customer service as extremely important. (Compared to 39% of engineers and 57% of executives).**

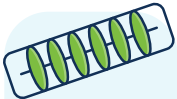






### What does outstanding customer service mean in the conveyor industry?

Customer service should provide you with personal attention and rapid response. Is service available 24/7? Does the organization have the knowledge base and global expertise needed for your specific needs? Does the organization provide service packages? Does the organization provide product testing before you purchase? Here is a 17-point checklist that you can review for ideas on servicing your conveyor system.

# 4.0 Conveyor Rankings

**How did each type of conveyor rank when it comes to the top considerations for evaluating a new system?** Cable and disc conveyors were rated best at maintaining the integrity and homogeneity of materials, best able to accommodate workspaces and facility requirements, most efficient regarding maintenance and downtime, as well as the most energy-efficient type of conveyor.

We asked those surveyed to choose the best type of conveying systems for each of these categories. Rankings start at 1 (the top-rated conveyor) and continue to 7 (lowest-rated conveyor). The lowest resulting numbers are the top-rated across categories.

	 <b>CABLE CONVEYORS</b>	 <b>ROUND-LINK CHAIN CONVEYORS</b>	 <b>PNEUMATIC CONVEYORS</b>	 <b>BUCKET ELEVATORS</b>	 <b>VACUUM CONVEYORS</b>	 <b>AERO MECHANICAL CONVEYORS</b>	 <b>SCREW AUGERS</b>
<b>Product Integrity</b> Maintaining the integrity and homogeneity of materials is critical in the conveying process, and some systems aren't up for the challenge.	1	2	3	3	5	4	6
<b>Energy &amp; Efficiency</b> The size of the motor and amount of horsepower required to run a conveying system can have a major impact on production costs.	1	3	2	4	6	5	6
<b>Maintenance &amp; Downtime</b> A system that requires frequent maintenance and part replacements will affect production throughput and cost of operation.	1	4	3	2	5	3	6
<b>Facility Requirements</b> Certain types of conveying systems can't accommodate some workspaces and facility requirements.	1	4	2	3	6	5	7
<b>Overall Rating</b> Conveyor systems have unique characteristics that may not be obvious until it is installed.	4	13	10	12	22	17	25
	<b>The Winner!</b> Dust-free environment, consistent blending, while practically eliminating product degradation.	<b>Red Flag:</b> Round-link chain conveyors tear up sprockets, resulting in excessive maintenance and prolonged downtime.	<b>Proceed with caution:</b> In some cases, more than 10% of delicate product can be damaged by air-powered systems.	<b>Design limitations:</b> Materials are thrown between buckets which may compromise blends, cause breakage of material, and limit where they can be used.	<b>Efficiency warning:</b> Energy usage, excessive noise, and potential for damage of materials at turns and endpoints are drawbacks.	<b>One catch:</b> If a slow and steady movement (like that of cable conveyors) can be achieved, breakage rates are reduced.	<b>Design flaw:</b> Damage, grinding, and separation can occur while the screw move the materials upwards from start to finish.

## Why Cable and Disc Conveyors Are Rated #1

In food-processing facilities, some materials are challenging to transport using traditional conveyance methods. These include delicate and fragile materials, powdered or granular materials, many of which are needed in bulk volumes for various production operations.

Food processing professionals rate cable and disc conveyors as #1 based on their hands-on experience with those technologies' ability to gently, cleanly, and reliably move materials through production facilities. Whether the materials are wet or dry and hot or cold, they can deliver them from room to room, floor to floor, and even building to building effectively and efficiently.

### Compared to other types of conveyor systems, cable and disc conveyors offer a number of advantages, such as:

- Sealed handling environment
- Low energy consumption
- Easy maintenance
- Broad market compatibility
- Reduced product breakage and loss
- Customizable configuration

Learn more about how coffee, nuts, snack foods, pet foods, grains, frozen foods, breakfoods, and more are moved by cable and disc conveyor systems.



## 4.1 Spotlight

# Cable Conveyors

Those who use cable conveyors are significantly more likely to feel that their conveying systems do an exceptional job of maintaining the integrity and homogeneity of the materials conveyed. This group also feels more strongly that their conveyor systems are highly efficient regarding maintenance and downtime as well as highly energy-efficient.

### What do you consider to be the top challenges facing the food and beverage processing industry?

Do an exceptional job of maintaining the integrity and homogeneity of the materials conveyed



Are highly efficient regarding maintenance and downtime



Are highly energy-efficient



■ Cable Conveyor Users    ■ All Others



## Cable vs Chain: Energy Efficiency

Cable conveyors ranked significantly higher than chain conveyors when it comes to energy and efficiency. Nearly half (49%) of all food processing employees surveyed say that cable conveyors are the most energy-efficient type of conveyor system compared to just 31% of those who listed round-link chain conveyors as a most energy-efficient system.

## Number of Conveyors

Companies that have 26+ conveyor systems identify cable and disc conveyor systems as the #1 choice as a system best able to accommodate their workspaces and facility requirements as well as the most energy-efficient.

# Participants and Methodology

**N = 290 Food & Beverage Processing Industry Employees**

## Job Role

Production Management	<b>48%</b>
Engineer	<b>16%</b>
Executive Management	<b>33%</b>
Other	<b>3%</b>

## Industry

Food	<b>82%</b>
Beverage	<b>10%</b>
Powder	<b>2%</b>
Plastic	<b>4%</b>
Hemp	<b>1%</b>
Other	<b>1%</b>

## Approximate annual revenue

Less than \$38 million in revenue	<b>28%</b>
\$38 - \$1 billion in revenue	<b>61%</b>
More than \$1 billion in revenue	<b>11%</b>

## Types of Products Conveyed

Coffee	<b>37%</b>
Nuts	<b>36%</b>
Snack foods	<b>61%</b>
Pet foods	<b>25%</b>
Breakfast cereal	<b>47%</b>
Breweries/specialty	<b>25%</b>
Seeds	<b>24%</b>
Beans	<b>27%</b>
Hemp	<b>12%</b>
Frozen food	<b>43%</b>
Powders	<b>18%</b>
Industry materials	<b>17%</b>
Other	<b>7%</b>

## Types of Conveying Systems Used/Recommended in Plants

Cable and Disc Conveyors	<b>40%</b>
Screw Augers	<b>27%</b>
Vacuum Conveyors	<b>50%</b>
Round-Link Chain and Disc Conveyors	<b>45%</b>
Pneumatic Conveyors	<b>41%</b>
Bucket Elevators	<b>34%</b>
Aero Mechanical Conveyors	<b>21%</b>

## Number of Conveyor Systems in Current Facilities/Plants

1 - 5 conveyor systems	<b>13%</b>
6 - 25 conveyor systems	<b>52%</b>
26 - 75 conveyor systems	<b>29%</b>
76 or more conveyor systems	<b>5%</b>



## Methodology

Ascend2 benchmarks the performance of business strategies and the tactics and technology that drives them. With a custom online questionnaire, this survey was fielded to a panel of 290 Production Managers, Engineers, and Executive Managers working in the food manufacturing and processing industry in the United States. The responses were collected from September 27, 2022 - October 14, 2022.

# About the Research Partners



Cablevey Conveyors is a worldwide expert in cable and disc conveying solutions, with 50 years of experience, 66 countries served, 1,000+ products moved, and 32,000+ conveyors commissioned.

Our 8" diameter conveyors move up to 8,000 lbs/hr (36,278 Kgs/hr) and are a common solution for conveying nuts, mixed products, chips, popcorn, coffee, etc. Other systems are 6", 4", and 2".

Learn more about [Cablevey](#).



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