Bangkok | 16th of October 2026

Integrated Packaging Lines:
Smart Packaging Solutions to Accelerate into the Premium Meat Market

Shane B.

Chanasit Buranapong

MD Multivac Thailand



Five forces are rewriting the manufacturing system

Technology is only one part of the shift

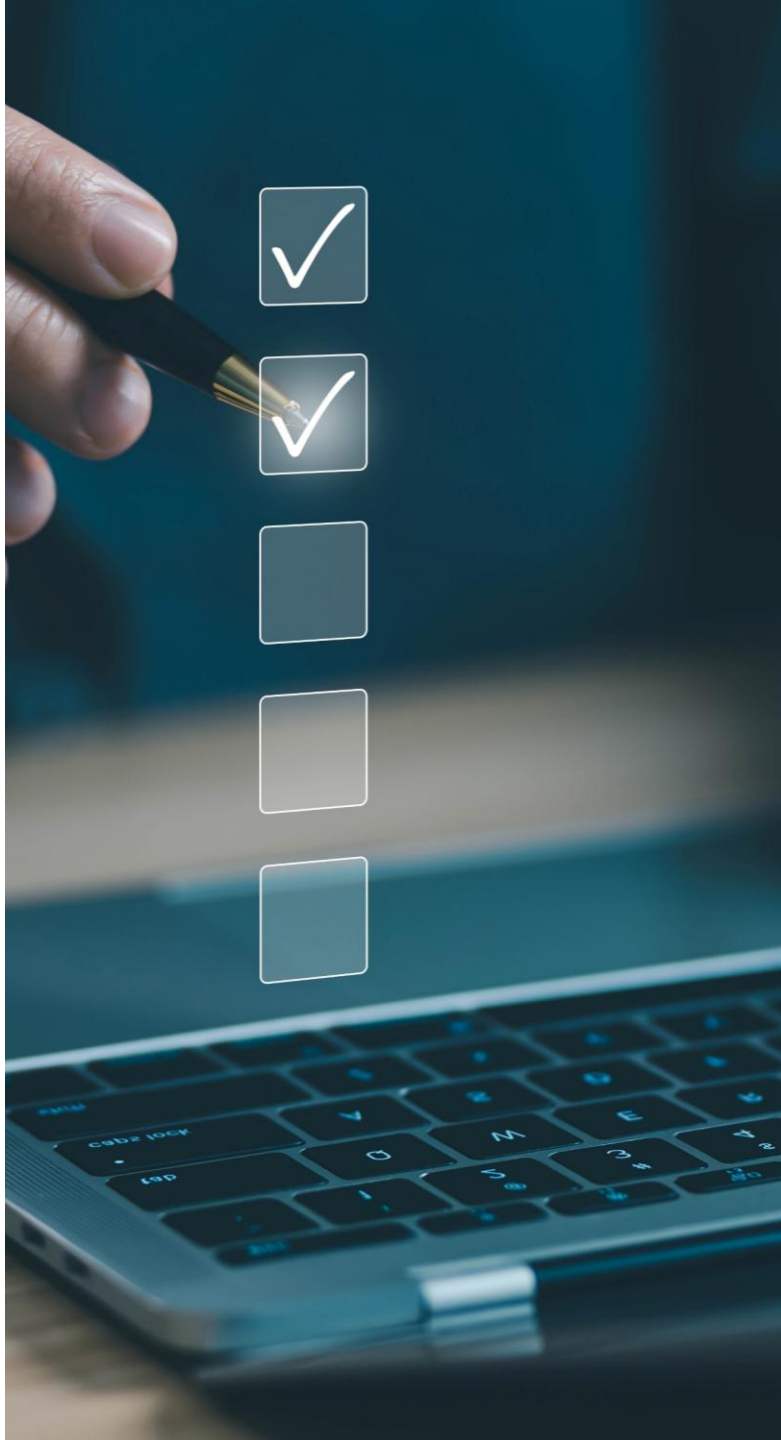
1	**Slower, uneven demand**	Forecast errors become more expensive
2	**Ageing and scarce skills**	Headcount can no longer be the capacity plan
3	**AI and automation**	Decision speed becomes a competitive advantage
4	**Carbon and traceability**	Product data becomes part of market access
5	**Supply chain volatility**	Resilience competes with lowest unit cost

39% of core skills expected to change by **2030**

Traditional 4Ps to Customer-Centric 4Cs

4P
Product
Price
Place
Promotion

4C
Customer Solution
Customer Cost
Convenience
Communication



- 4Cs support new concept to have a customer centric as a core of thinking
- Combine with new generation behavior and economical demand
- Use the information from "**PwC Voice of the Consumer 2025**" with 4Cs concept on meat product

What customers value in premium meat

Four purchase lenses shape product choice and the packaging experience

01 CUSTOMER SOLUTION

Does it solve my meal need?

Meal-fit cuts and formats
Taste and texture
Clear ingredients and quality
Portion suited to the occasion

FIT THE MEAL

02 COST

Is the total value worth it?

Price per pack and per serving
Right pack size for the household
Food waste and spoilage risk
Time spent preparing the meal

MAKE VALUE VISIBLE

03 CONVENIENCE

Can I buy, store, and cook it easily?

Easy to find across channels
Simple opening and storage
Fast preparation and cooking
Reliable delivery and cold chain

REMOVE FRICTION

04 COMMUNICATION

Can I trust what the pack says?

Origin and traceability
Ingredients and handling
Freshness and quality evidence
Useful cooking guidance

EARN TRUST

THAI CONSUMER SIGNALS | PwC Voice of the Consumer 2025 (n=521)

57% living costs affect spending

78% buy prepared food weekly

70% try to avoid highly processed food

Factor map is a strategic interpretation of consumer survey and industry outlook data.

FROM CUSTOMER NEED TO PACK DESIGN

Turn each 4C factor into a solution

Smart packaging should make value easy to notice, verify, and use

	4C LENS	FACTOR TO WIN	PRODUCT + PACKAGING RESPONSE	TEST WITH
01	**CUSTOMER SOLUTION**	**Meal fit, cut, taste, portion, ingredient clarity**	Offer use-specific formats: steak slices, portioned chicken, cook-ready cuts. Show serving size and cooking method.	**Trial-to-repeat**
02	**COST**	**Price per serving, pack size, food waste, prep time**	Test single-meal and family packs. Use reseal or portion separation where suitable. Prove any shelf-life benefit.	**Price / serving** **Waste or markdown**
03	**CONVENIENCE**	**Availability, storage, opening, cooking, delivery**	Design easy-open packs with clear storage and prep instructions. Validate performance in chilled delivery.	**Prep / open issues** **Online conversion**
04	**COMMUNICATION**	**Origin, ingredients, freshness, handling, proof**	Use clear labels and QR for batch origin, handling, recipes, or standards that can be verified.	**QR scan rate** **Trust / complaint**

PRODUCT CONCEPTS

Portion-ready **Cook-ready** **Long Shelf-life – Multi time pack**

Test consumer acceptance, package integrity, cold-chain performance, and any freshness or shelf-life claims before launch.

The operating model changes in six practical ways

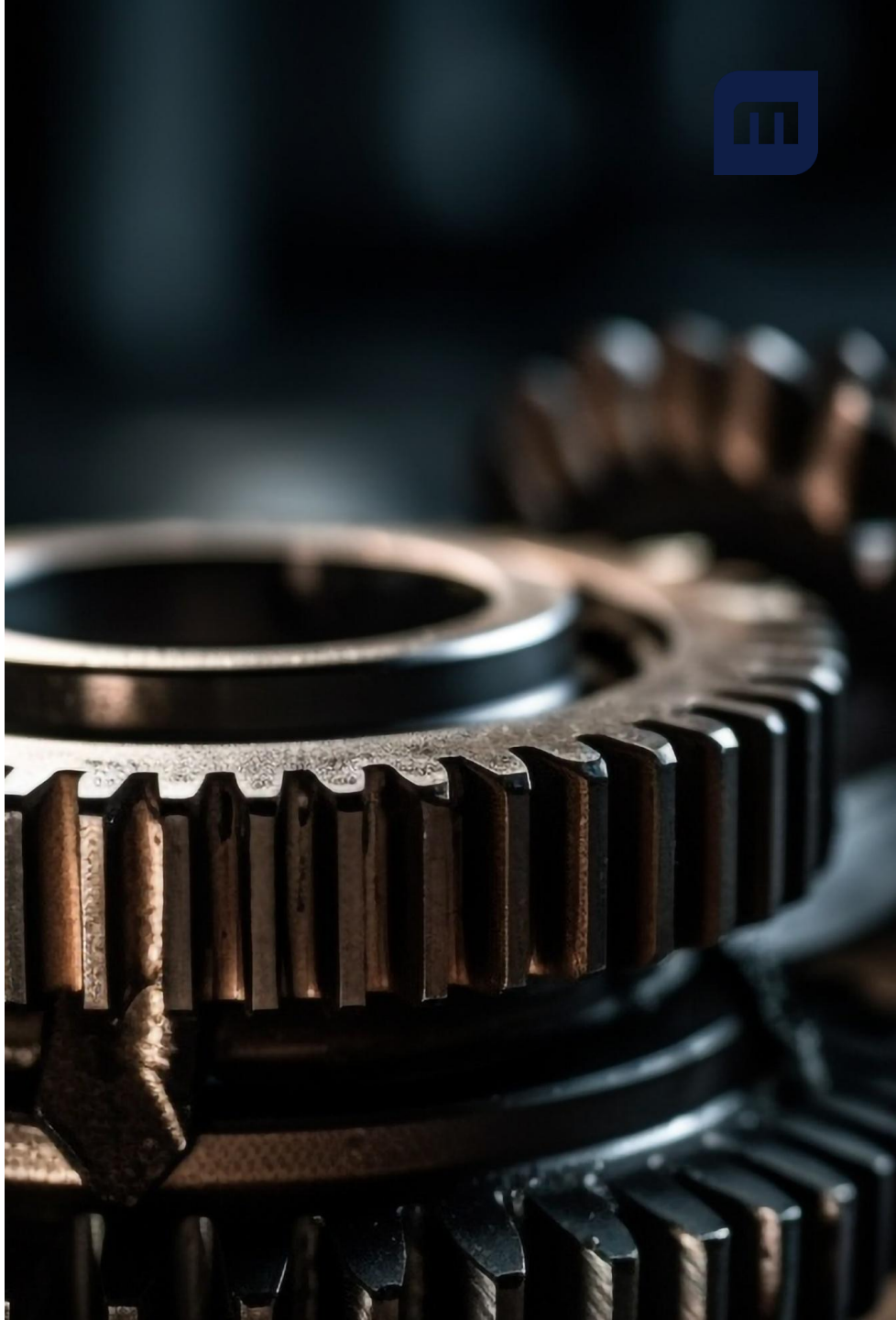
Today’s factory compared with a 2030-ready factory

TODAY	2030-READY
Annual Forecast and push	**Demand sensing and short feedback loops**
Dedicated lines	Flexible cells and fast changeovers
Number of Operator / follows instructions	Operator supervises automation and solves problems
Periodic reports	Live exceptions and predictive alerts
Inspect at the end	Quality built into the process with vision and data
Cost per unit	Total value: cost, speed, resilience, carbon

Robustness | The Foundation

- Machine function has freely adjusted and flexible enough to support a skilled user
- Problem solving able to assist from operator skill and advice from HMI

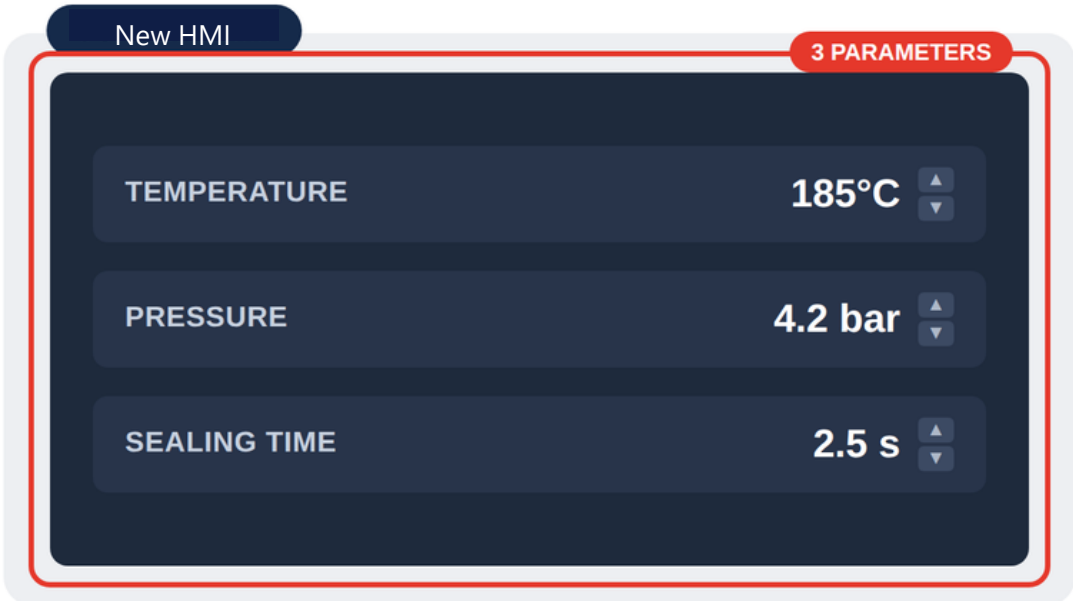
- 50 more Parameters freely adjustable
- Good training assistance
- Skilled engineer



From Technical Parameters to User-Centric Control

This is what the line setup should look like:

- ageing worker
- Skill unbalance
- Fast changer over
- New technology change



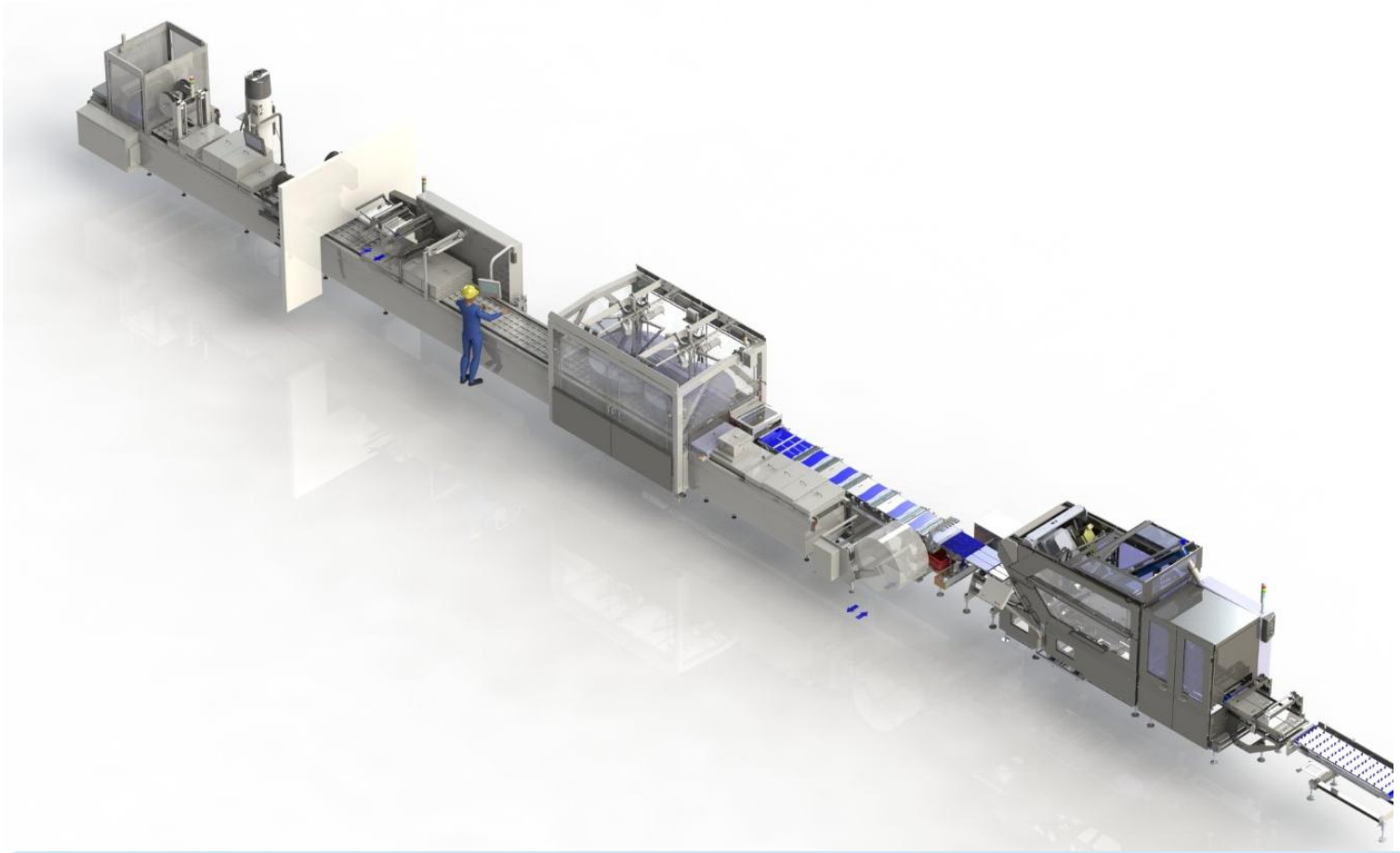
What would it be in the Future?

From Robust Machines
To Autonomous Lines



Best Practice | MULTIVAC Cold Cut Line

Innovative and customer-oriented line concept



GERMAN PACKAGING AWARD 2026

- One staffs operation
- Fully integrated line
- Same control in all the line

Multivac Automation Cold Cut Line, bringing the best slicing line on the market!



Running A Shift Without Operator

Lights Out Production? For Sure.
Autonomous MULTIVAC Production Lines

DIFFERENT REALITY.

Focus on Technical support, spare parts stock and reaction service

Part will be change periodically or when it is broken

Preventive Maintenance

NEW EXPECTATIONS.

Machine online with server and integrated with AI

Possible to have prewarning breakdown

Engineering on site to check and replace part before broken

Predictive Maintenance

AI-generated content


Predictive maintenance is comparable with an insurance for your line.
99.8%

Consumer demand from 4C
Focusing product

Portion-ready

Cook-ready

Long Shelf-life
Multi time pack



Portion-Ready?

- Single product, for difference meal serve



- Single pack for difference meal serve





Packed in automate line, less operator, more precise, less waste and give away!

MULTIVAC Vision Systems
AI-Vision

AI-Vision Applications

- Product Identification and grading of ready meals
- Anomaly detection in pizza & tart flambe
- Product Classification of raw meat (pork and beef)
- Quality detection of meat fish and poultry



Value

- Consistent product classification
- Automated quality assurance
- Early defect prevention
- Reliable product grading & traceability



Benefit

- Work through next-generation AI-powered quality solutions
- Drive business growth by extending automation beyond traditional inspection

Cook-Ready ?


KUH'L MIT HERZ




10.000+ klantreviews
Thuis eet
je gewoon
Uitgekookt

Cook-Ready ?
Serve Ready





Multiply your Value
Long Shelf-life, Multi time pack

The After-Opening Hassle!

- Portion too big can not consume in one time
- The product freshness is less after open
- It can spoil easy after open
- When will? a color and taste change



Multiply your Value
Long Shelf-life, Multi time pack



- Keep product longer
- Keep look longer
  - Skin pack?
    - Advance with more barrier film
    - More durable film
    - Support with gas flashing (MAP)
    - Special breathable film







Multiply your Value
Long Shelf-life, Multi time pack

- Shorten time to process the meat with automate line
- Increase Meat quality and hygienic
- Fully washable machine



- Weight & quality sorting, efficient reworking



+

- Crush Freezer to integration slicer or Portioner

- Automated loading of meat portions to thermoformer



Multiply your Value
Long Shelf-life, Multi time pack



- Re Sealable film
- Window film
- Tap and close pack





Multiply your Value
Regulation and Circularity

- PPWR (Packaging and Packaging Waste Regulation) (EU) 2025/40

Mono-material structures

PE / PE	PP / PP	BOPET / BOPET
PE PE	PP PP	BOPET BOPET
Frozen food, flowpack and pouches, Low-temperature seal, toughness, barrier	Cheese, snacks, chilled food. Sealability, moisture barrier& stiffness	Top lidding for APET trays. Seal, peel, antifog

Reference multilayer
BOPET / PE combines different polymer types.
It remains relevant where the application needs a wider performance envelope.



Mono-family describes the main polymer route. It does not by itself prove recyclability or a future PPWR grade.

Multiply your Value
Regulation and Circularity

Live demonstrations with Multivac

Nordic Food HUB



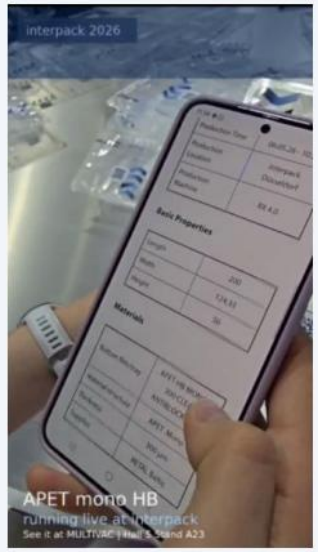
Live on a MULTIVAC line — seal integrity and peel behaviour checked on the spot.

Interpack 2026



Mono PET trays formed and sealed at line speed, so machinability is proven before a trial is booked.

Digital Passport to Mono HB PET



QR-linked pack data shown live — structure, recyclability and compliance evidence in one scan.

A live run proves film, machine and product together — evidence the customer has seen.

Six tools that make the new operating model possible

01

Connected data

Common definitions, open interfaces, contextualized shop-floor data

02

AI assistance

Planning, troubleshooting, knowledge retrieval and decision support

03

Flexible automation

Cobots, AMRs and modular equipment for mix changes

04

Digital quality

Machine vision, traceability and process control

05

Predictive operations

Condition monitoring, digital twins and maintenance analytics

06

Energy and carbon

Metering, product-level footprint and auditable records



Lightening your product with



MULTIVAC