

**INCAP**

INNOVATION IN PACKAGING

# INCAP INNOVATION BRIEF.

**INSIGHTS. TRENDS. INNOVATION.**

Driving the Future of  
Functional Beverages



INSIGHTS  
THAT INFORM



TRENDS  
THAT SHAPE



INNOVATION  
THAT DELIVERS



IMPACT  
THAT MATTERS



ENGINEERING  
EXCELLENCE



PROTECTING  
WHAT MATTERS



SCALABLE  
SOLUTIONS



SUSTAINABLE  
BY DESIGN



PARTNERSHIPS  
THAT GROW



GLOBAL  
PERSPECTIVE

**INNOVATION BRIEF**

FOR THE FUNCTIONAL BEVERAGE INDUSTRY

EDITION 01 / 2026



The latest insights, technology developments and market trends from Incap – your partner for next-generation beverage innovation.

## INCAP Innovation Brief

### Innovation Starts with Better Engineering

Discover how ingredient separation is shaping the next generation of functional beverages.

## The Future of Functional Beverages Starts Here

Consumers no longer expect beverages simply to hydrate.

They increasingly seek products that deliver measurable health benefits, premium quality and a memorable user experience. Functional beverages have therefore evolved from simple ready-to-drink products into sophisticated delivery systems that combine formulation science, intelligent packaging and consumer interaction.

This evolution creates exciting opportunities—but also significant technical challenges.

Many functional ingredients lose stability when exposed to water over extended periods. Vitamins, amino acids, probiotics, botanical extracts and other sensitive compounds may gradually degrade during storage, forcing manufacturers to compromise between ingredient performance, shelf life and production practicality.

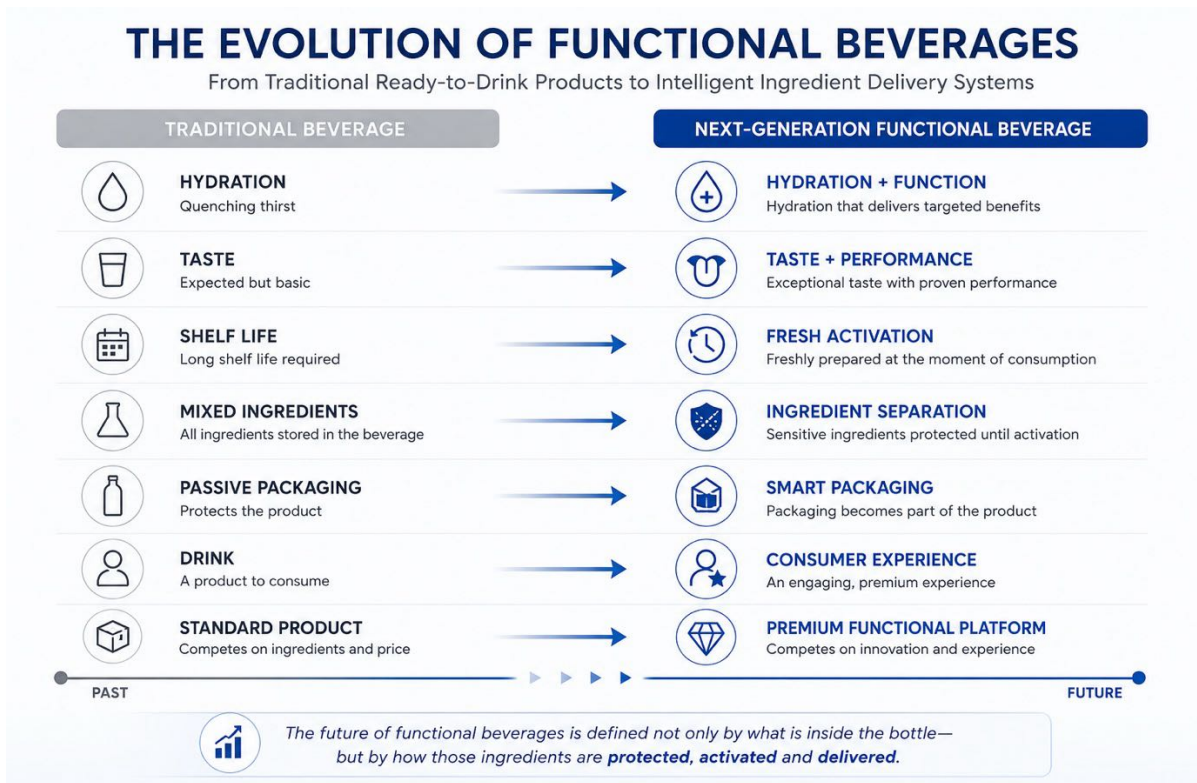
At INCAP, we believe there is a better way.

Rather than storing sensitive ingredients inside the beverage throughout its entire shelf life, the patented INCAP dosing system protects them inside a dedicated chamber until the exact moment of consumption.

The result is a beverage that delivers freshness, functionality and engagement exactly when they matter most.

## Engineering Insight

**The future of functional beverages is no longer defined by adding more ingredients. It is defined by delivering those ingredients more intelligently.**



## Meet INCAP More Than a Dosing Closure

INCAP is a patented ingredient separation platform developed specifically for next-generation functional beverages.

Rather than functioning as a conventional bottle closure, INCAP becomes an active component of the product itself.

The system safely stores powders or liquid concentrates inside a dedicated chamber until activation by the consumer.

Only immediately before consumption are the active ingredients released into the beverage.

This simple but powerful engineering principle creates entirely new opportunities for beverage innovation.

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### Fresh Consumer Activation

The consumer experience is intentionally intuitive.







#### Turn > Push > Release > Shake > Enjoy

Within seconds, the beverage is freshly prepared.

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### One Platform. Numerous Applications.

The flexibility of the INCAP platform supports a broad range of beverage concepts, including:

-  Functional Hydration
-  Sports Nutrition
-  Energy & Focus
-  Wellness
-  Beauty
-  Medical Nutrition (project specific)



**Protect. Activate. Deliver.**

*One platform. Endless beverage opportunities*

## WHY CHOOSE INCAP?

FIGURE 11.1

# WHY CHOOSE INCAP?

Key differentiators and benefits for brands, manufacturers and consumers

INCAP is more than a cap – it is a patented dosing system that protects, activates and delivers.

KEY DIFFERENTIATORS	INCAP	Traditional Solutions	CORE BENEFITS	
 <b>MAXIMUM INGREDIENT PROTECTION</b> Ingredients remain separated from the beverage until activation. Protected from moisture, oxygen, light and interaction.	 Separated & protected until consumption	 Exposed to liquid and environment	 <b>FOR BRANDS</b> Innovative product differentiation and premium positioning.	
 <b>EXTENDED SHELF LIFE</b> Significantly longer stability of functional ingredients – no premature degradation.	 Up to 24 months or more	 Often reduced shelf life	 <b>FOR MANUFACTURERS</b> Process efficiency, lower waste and scalable production.	
 <b>PRECISE DOSING</b> Pre-measured portions ensure accuracy, consistency and performance.	 Exact dose every time	 Dosing errors and variation	 <b>FOR CONSUMERS</b> Fresh activation, great taste and better performance.	
 <b>SUPERIOR CONSUMER EXPERIENCE</b> Easy, intuitive and engaging activation. Freshly mixed – better taste and effect.	 Shake, mix and enjoy	 Complicated steps or pre-mixed	 <b>FOR THE PLANET</b> Recyclable solution and responsible resource use.	
 <b>EFFICIENT MANUFACTURING</b> Enables cold-fill production with stable ingredients and high line efficiency.	 Cold fill, high speed, less complexity	 Hot fill or complex processes	<b>THE INCAP ADVANTAGE</b> 	
 <b>WIDE APPLICATION FLEXIBILITY</b> Suitable for powders and liquids in a broad range of beverages and product categories.	 Powder & liquid multiple applications	 Often limited to specific formats		
 <b>SUSTAINABLE BY DESIGN</b> Designed for recyclability and reduced material use. Supporting a better future.	 Recyclable materials responsible design	 Mixed materials harder to recycle		
<b>AT A GLANCE – INCAP DELIVERS MORE VALUE</b>				
 Better ingredient stability and longer shelf life	 Accurate dosing and consistent performance	 Premium consumer experience and brand perception	 Efficient production and lower total cost of ownership	 Sustainable solution for a better tomorrow
			 <b>INCAP – A SMART CHOICE FOR SUCCESS</b> A unique combination of protection, precision and performance. The future of functional beverages.	

**i** INCAP. Protecting what matters. Activating what works. Delivering what consumers love. | Patented. Proven. Trusted by forward-thinking brands worldwide.

## Why Beverage Innovators Choose INCAP

The INCAP platform combines ingredient protection, consumer activation and industrial scalability within one patented engineering solution.

It enables beverage developers to create differentiated functional products while reducing technical risk throughout product development and commercialization.

## From Concept to Commercial Success

Every successful functional beverage follows a structured engineering pathway. Rather than making large investments based on assumptions, successful projects validate each engineering milestone before progressing to the next stage.

This methodology reduces technical uncertainty while accelerating commercial implementation.

FIGURE 5.0

# TYPICAL DEVELOPMENT JOURNEY

FROM IDEA TO MARKET – A COLLABORATIVE PATH TO SUCCESS

A structured journey with clear stages, defined deliverables and continuous collaboration.



## Engineering Principle

Every validated step reduces uncertainty for the next.

## Selecting the Right INCAP

Choosing the appropriate INCAP system is one of the most important engineering decisions during product development.

Successful projects begin by understanding the formulation—not by selecting the closure.

Engineering evaluation should always consider:

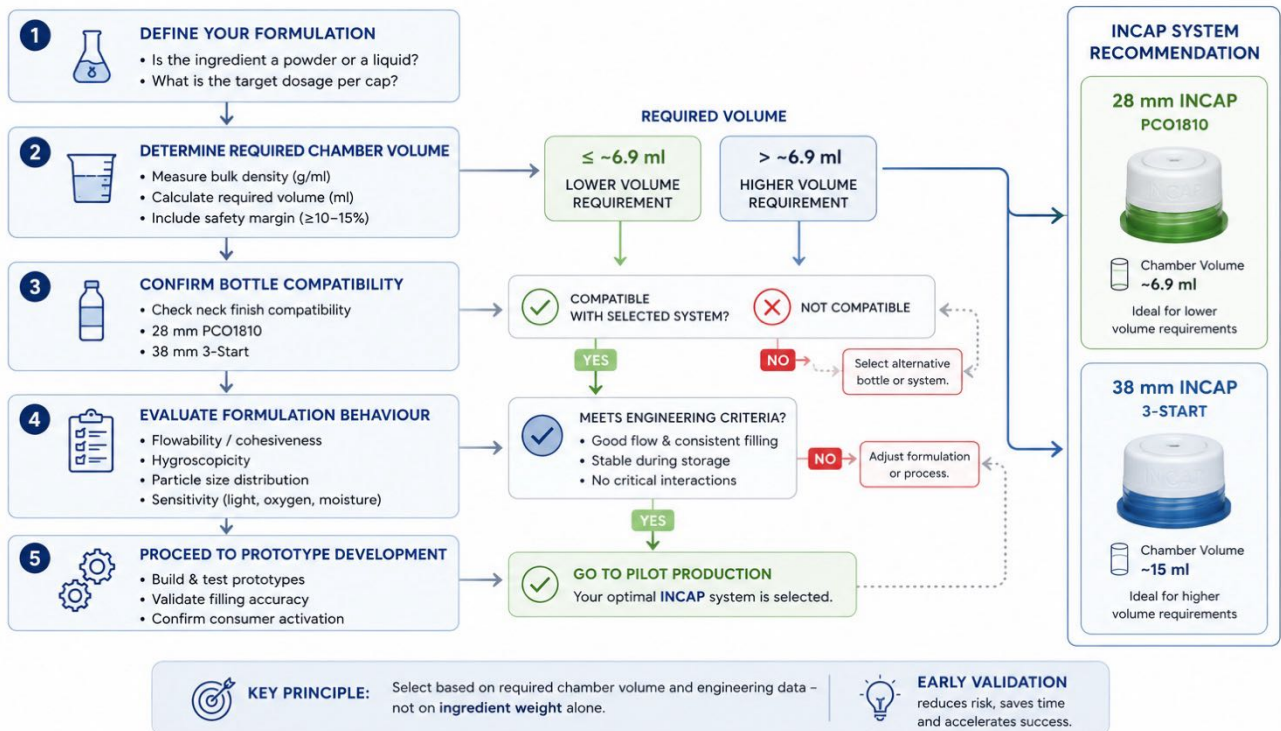
- Chamber volume
- Bulk density
- Bottle compatibility
- Manufacturing requirements
- Commercial objectives

The decision tree below illustrates the structured engineering approach used throughout INCAP development projects.

## CHOOSING THE RIGHT INCAP

### ENGINEERING DECISION TREE

A structured approach to select the optimal INCAP system for your functional beverage.



## Key Engineering Principle

Measure first.



Validate second.



Scale third.

## Flexible Collaboration Models

### MODEL A

#### Empty INCAP Supply

Ideal for manufacturers performing filling and assembly locally.

### MODEL B

#### Filled INCAP Supply

Professional INCAP filling while bottling remains under your control.

### MODEL C

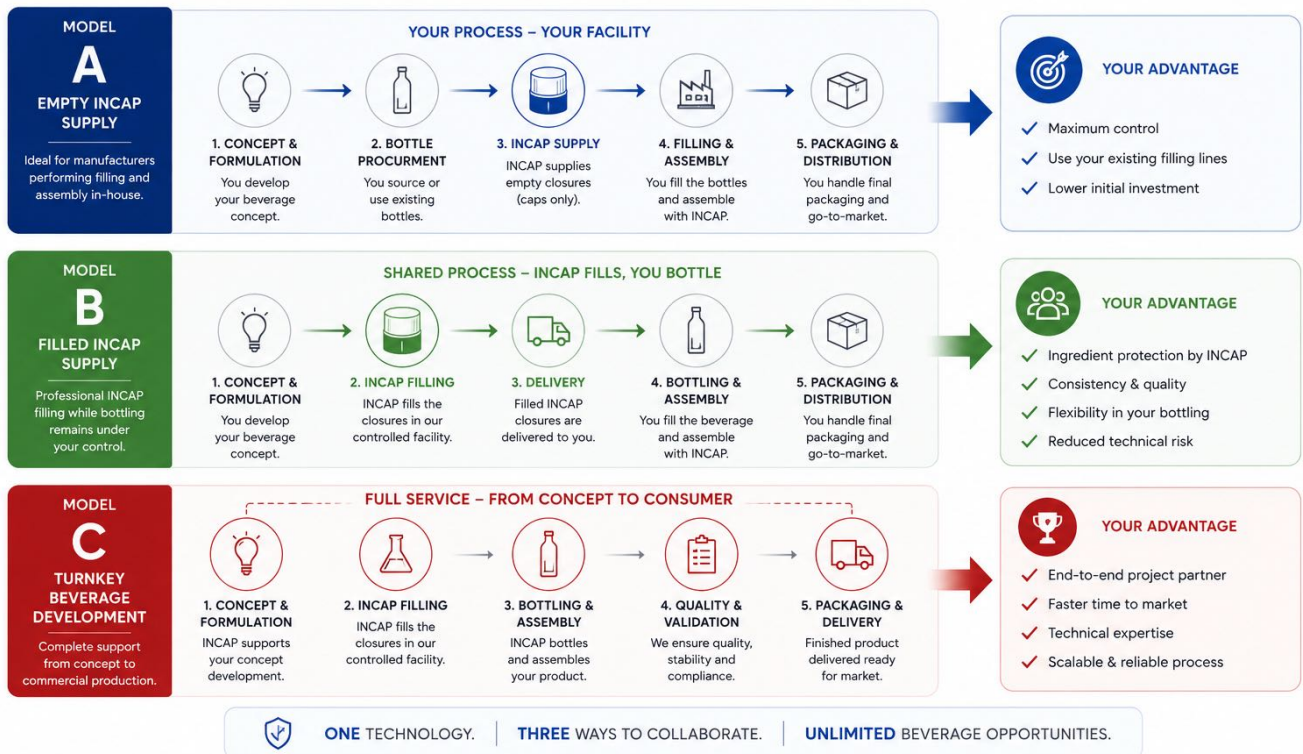
#### Turnkey Beverage Development

Complete support from concept to commercial production.

## THREE FLEXIBLE COLLABORATION MODELS

• CHOOSE THE PATH THAT BEST FITS YOUR CAPABILITIES AND GOALS •

INCAP adapts to your project – from supplying the closure to developing your finished beverage.



**One Technology. Three Flexible Development Models. Unlimited Beverage Opportunities.**

## Ready to Explore Your Next Beverage Innovation?

### From Inspiration to Commercial Reality

Every successful beverage starts with an idea.

The difference between an interesting concept and a successful commercial product is rarely the ingredient alone.

It is the combination of engineering, packaging, manufacturing and consumer experience that ultimately determines market success.

At INCAP, we help transform innovative beverage concepts into scalable commercial products by combining ingredient separation technology with practical engineering support and international manufacturing expertise.

Whether you are evaluating a new functional beverage, preparing your first prototype or planning commercial production, we would be pleased to support your development journey.

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## Your Next Step

### Let's start with a conversation.

Together we can discuss:

- ✓ Your beverage concept
- ✓ Your functional ingredients
- ✓ Recommended INCAP system
- ✓ Bottle compatibility
- ✓ Prototype strategy
- ✓ Pilot production
- ✓ Commercial implementation

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### What Happens Next?

#### Step 1

##### Initial Technical Discussion

Share your product idea and project objectives.

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#### Step 2

##### Engineering Evaluation

We review your formulation and recommend the appropriate development pathway.

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#### Step 3

##### Prototype & Validation

Build, test and validate your product before commercial investment.

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#### Step 4

##### Commercial Scale-Up

Launch a technically validated product with confidence.

## Continue Your Journey

For more detailed information, we invite you to explore the complete INCAP Development Series.

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### INCAP Innovation Brief

#### Discover the Opportunity

*(This document)*



### INCAP Executive Guide

#### Understand the Technology & Development Methodology



### INCAP Functional Beverage Development Handbook

#### Master the Complete Engineering Process



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### Engineering Better Beverages.

Innovation begins with curiosity.

Engineering transforms ideas into products.

Partnerships transform products into successful businesses.

**Together, let's build the next generation of functional beverages.**

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**Protect. Activate. Deliver**

# ENGINEERING BETTER BEVERAGES.



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**Engineering** transforms ideas into products.



**Partnerships** transform products into successful businesses.

**INCAP**<sup>®</sup>  
INFUSION CAP TECHNOLOGY

Protect. **Activate.** Deliver.

 [www.incap.hk](http://www.incap.hk)

“ Together, let's build the next generation of functional beverages. ”



INGREDIENT PROTECTION



FRESH ACTIVATION



INDUSTRIAL SCALABILITY



LONG-TERM PARTNERSHIP

PROTECT. **ACTIVATE.** DELIVER.