



Pharmapan

Superior Drug-Delivery Devices and
Pharmaceutical Packaging Solutions
based on Flexible Foils

Advanced Drug Protection – Easy to Use – Precise Application



Pharmapan

Superior drug-delivery and pharmaceutical packaging solutions

We provide a strong synergy of in-depth engineering and pharmaceutical knowledge, combined with Swiss ingenuity and highest quality standards.

Product Focus:

- Compact & portable
- Single dose units
- Fast & simple to use

Innovation

Scientists, engineers and innovators at heart, we try, test, mix & match to overcome all technological challenges to create the **perfect drug-delivery** and packaging solution **for your product**.

With equal focus on product **usability**, regulatory **adherence** and production **efficiency**, our team and network of experts will help you gain the competitive edge.

R&D

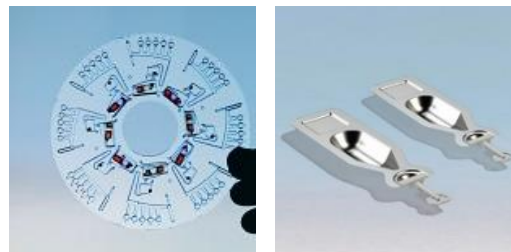
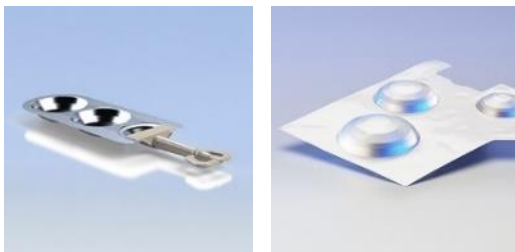
Thanks to **close partnerships** with academia, laboratories, the pharmaceutical industry and engineering partners **worldwide**, we are at the **forefront** of current technological **development** and possibilities.

Our research covers all areas from pharmaceutical and material properties to **safety and stability** as well as logistics and product functionality.

Know-How

With **over 50 years of experience**, we ensure a **smooth transition** from the initial idea to your final product, ready for mass production.

From adhering to strict pharmaceutical industry regulations to **fine-tuning** mechanical **execution** - our practical production **know-how** enables us to address all challenges successfully.



Showcase: The Dual Chamber Blister

A highly mobile, fully self contained solution



New markets and higher margins:

Raise your product value significantly with this drug-delivery and packaging innovation

Our proprietary Dual Chamber Blister is a novel delivery and protection system for highly moisture-, light- and temperature-sensitive drug candidates (e.g. vaccines) and marketed drugs that require administration as a liquid, with accurate mixing just prior to use.

This innovation allows for easy and convenient reconstitution of multiple ingredients and can markedly improve user compliance.

Suited drugs could also more safely be shipped to places with intermittent cold chain and used despite limited availability of clean water.

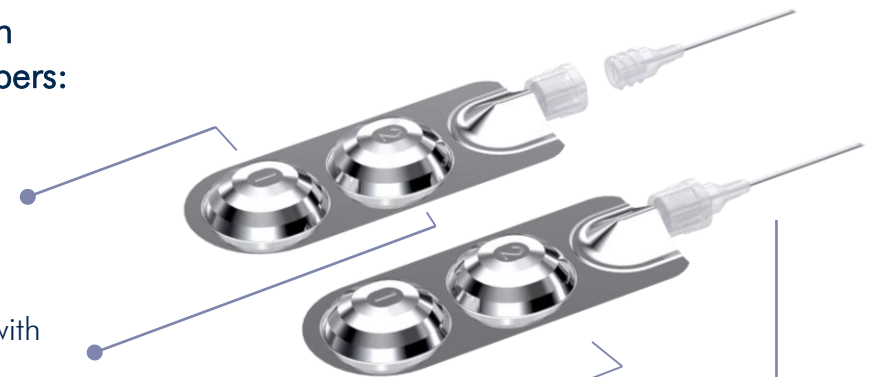
Ideal for vaccines, lyophilizates, ophthalmics, diagnostic reagents & washing agents.

Your point of care is on the spot:

Two ultra-high barrier chambers:

1st one filled with mixing agent (liquid)

2nd one filled with the formulation (powder/lyophilizate)



Easy & precise application:

With simple finger compression the ingredients are reconstituted/mixed and precisely applied/injected.



Spout variant

Various adapters and spouts are possible

Key Technology Advantages

The Pharmapan Multiple Chamber Blister Technology



Usage Advantages:

High convenience in a self-contained, single use unit

- Small, fully functional unit to be carried until needed; reconstituted & applied without utensils

Durable & easy to transport

- Robust and easy to handle primary packaging
- Potential of longer shelf life
- Higher resistance potential to cold chain interruptions

Compliance & precision

- Sterile right up until application
- Correctly mixed and precisely dosed for easy application on-the-spot

Industry Advantages:

Reduced distribution & storage costs

- Easier and cheaper to store*
- Low weight - less costly distribution**

Potentially longer shelf life and lower COGS

- Less spoilage

Branding

- Prominent branding on primary packaging (entire product backside, full color)

* No risk of **glass** breakage. No protective secondary packaging needed.

** >50% lighter vs. vials

Impact on Manufacturing and Supply Chain



Key benefits of the Dual Chamber Blister

Process:	Bulk Production	Formulation	Fill & Finish	Transportation	Warehousing	Transportation	HCP End User
Challenges:	<ul style="list-style-type: none"> • Yields/costs • Containment 	<ul style="list-style-type: none"> • Yields/costs • Sterility 	<ul style="list-style-type: none"> • Yields/costs • Sterility 	<ul style="list-style-type: none"> • Cold chain • Costs • Efficiency 	<ul style="list-style-type: none"> • Cold chain • Costs • Efficiency 	<ul style="list-style-type: none"> • Cold chain • Costs • Efficiency 	<ul style="list-style-type: none"> • Cold chain • Convenience of use

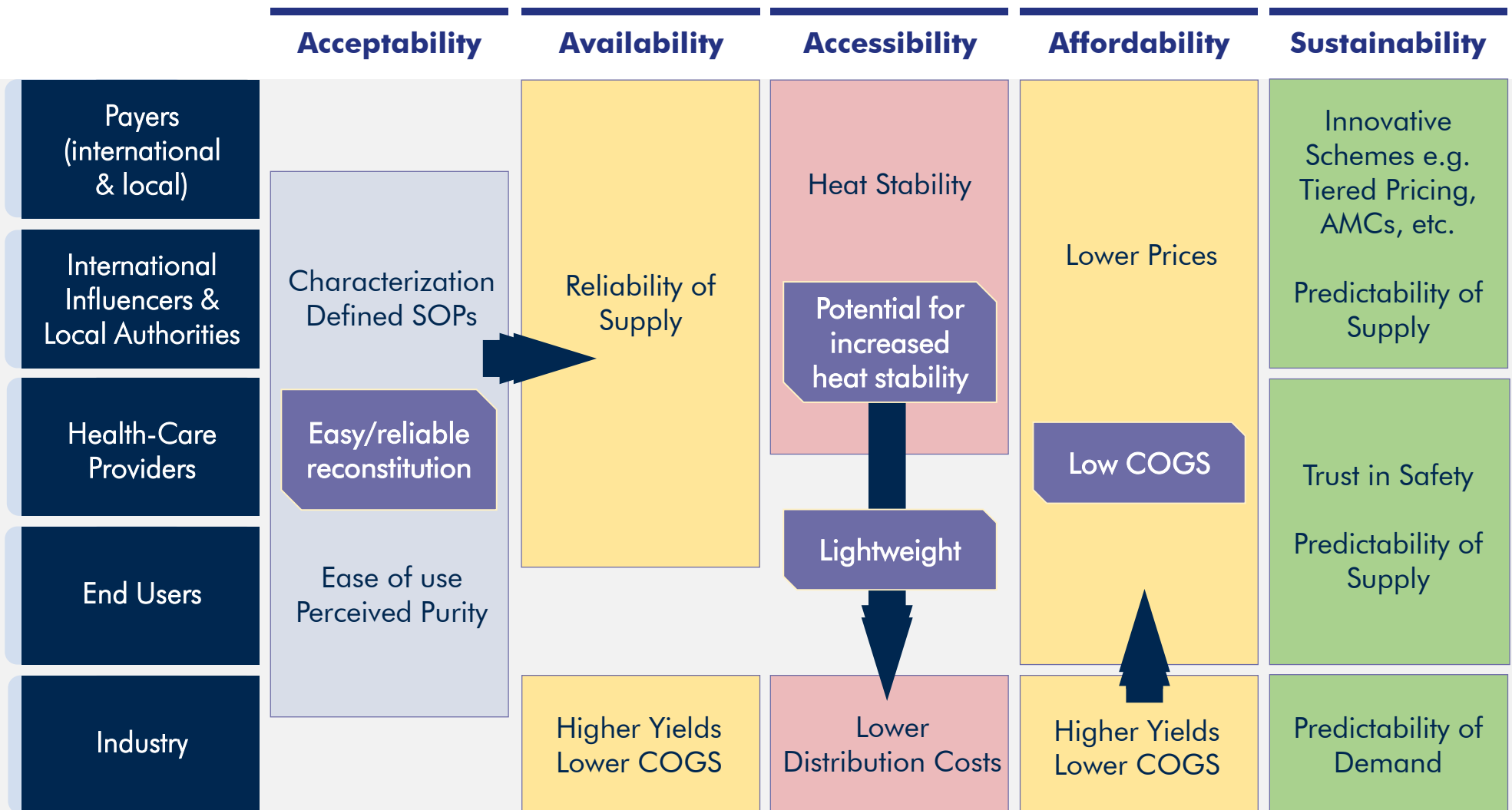
The "Sweet Spot" of the Pharmapan Solution

Advantages:

✓ Lightweight	+	+	+	+	+
✓ Low unit cost	+				+
✓ Easy handling	+				+
✓ Simpler secondary packaging	+				+
✓ Less cold chamber space occupancy	+	+	+	+	+
✓ Potentially higher resistance to cold chain breaches		+	+	+	+
✓ Ease of reconstitution					+
✓ No risk of confusing diluent					+
✓ Spill-proof					+
✓ Less wastage (single dose)					+

Impact Matrix

The impact areas of the Pharmapan Dual Chamber Blister solution



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