



Hovione Product Development & Licensing

Courtney R Smith

Bio Europe Conference: Delivery Track Wednesday, November 5, 2014



Agenda

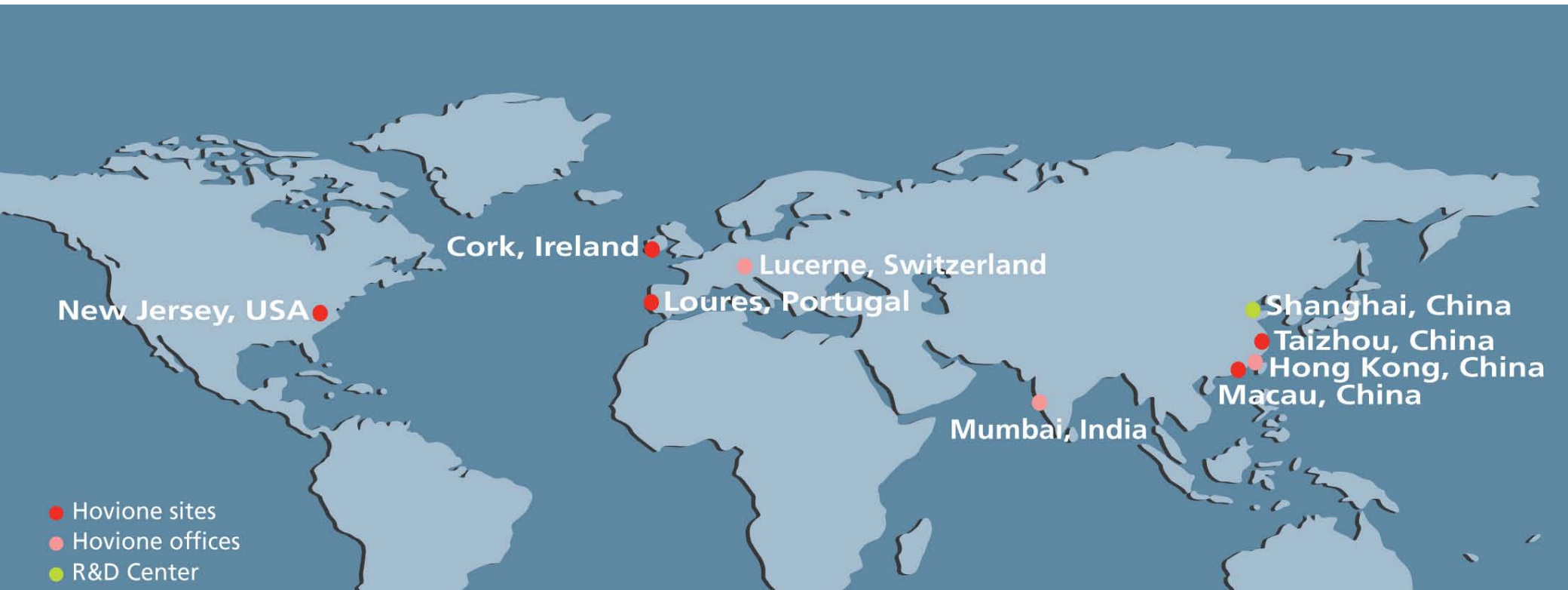
Hovione overview

Product Development & Licensing

Integrated approach to pulmonary delivery

Dry powder inhalation devices

A leader in Active Pharmaceutical Development and Manufacturing since 1959...



New Jersey, USA

Technology transfer center.
R&D Labs, Kilo and pilot plant.
Sales and marketing for North America



Loures, Portugal

430 m³ manufacturing facilities
including R&D Labs, kilo and pilot plants



Macau, China

100 m³ manufacturing facilities



Cork, Ireland

427 m³ manufacturing facilities



Taizhou, China

350 m³ manufacturing facilities



Shanghai, China

Process chemistry
R&D Center

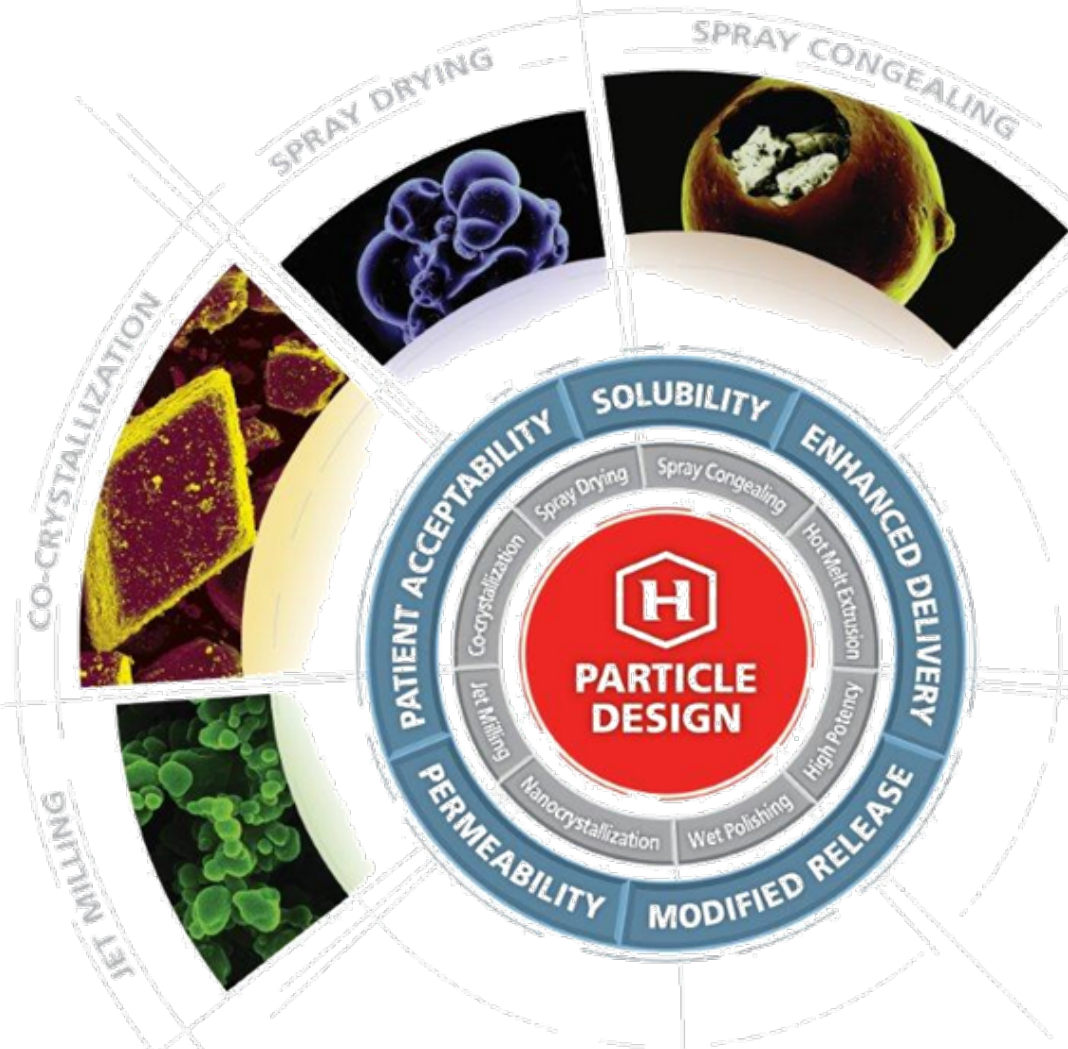


Overview of Hovione







































- Privately-held; stable management
- 1200 Team members world-wide
- Our customers:
 - Biotech
 - Medium, specialty and large pharma
 - 50% innovators, 50% generics
- Revenues (2013) USD 201 m
- Sales: World-wide reach
 - 40% USA, 25% EU, 25% Japan



Growth fueled by particle technology platforms



Particle Engineering Technologies

TECHNOLOGIES	SOLUTIONS				
	Solubility	Enhanced Delivery*	Patient Acceptability	Modified Release	Permeability
Spray Drying					
Hot Melt Extrusion					
Nanocrystallization **					
Wet Polishing					
Jet Milling					
Co-crystallization **					
Spray Congealing					
Controlled Crystallization**					
Emulsification **					
Fluidized Spray Drying					
Inclusion Complexes					

*Enhanced delivery by non-oral routes of administration including lung delivery

** New offer/ coming soon

Agenda

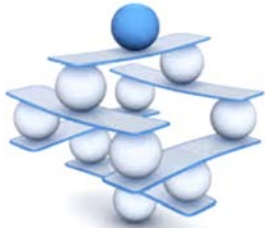
Hovione then and now

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Dry powder inhalation devices

Product Development and Licensing



Build a balanced drug product portfolio

- Reformulated products from known APIs (505b2)
- High value Generics (DPI)



Leverage on our technology strengths

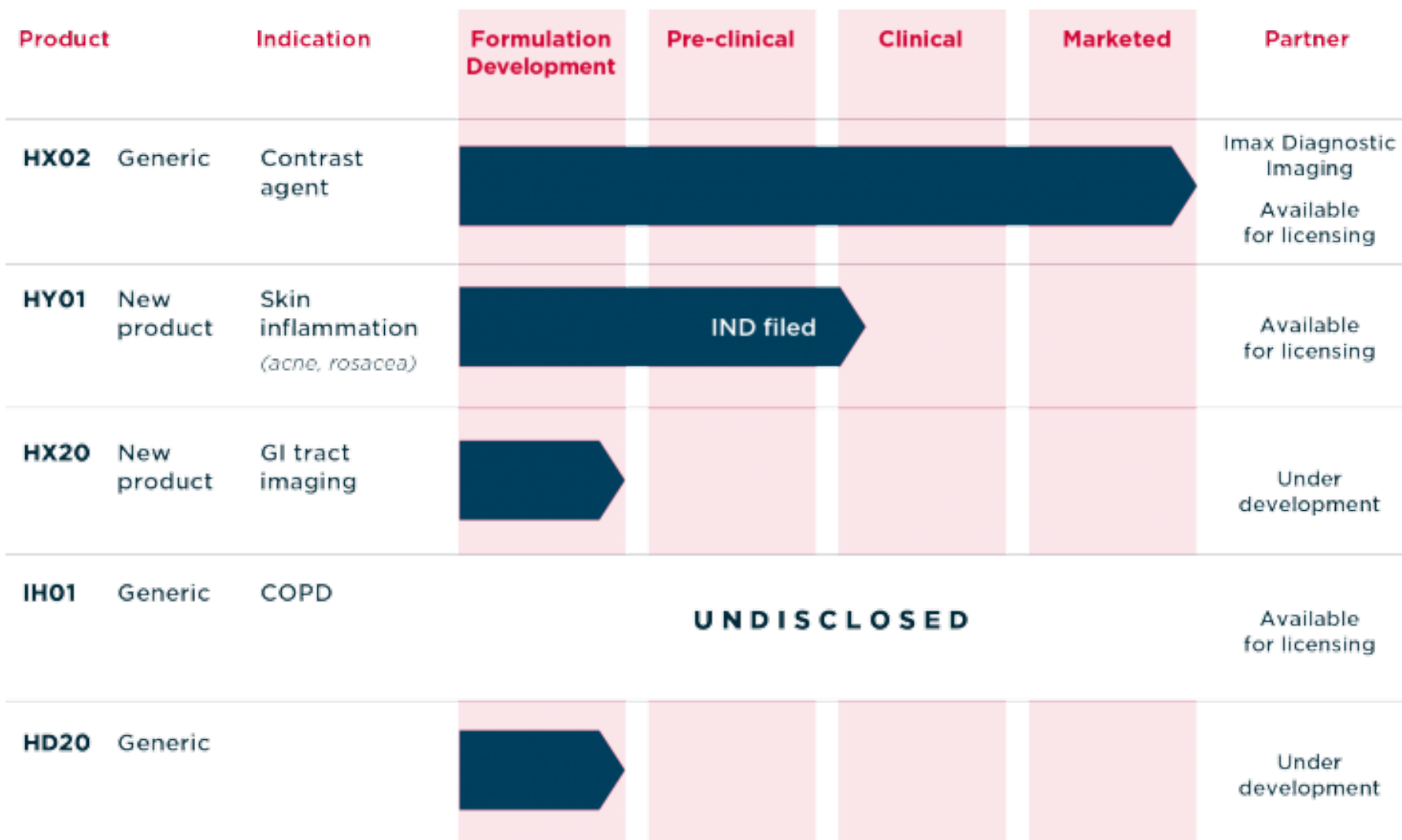
- Particle Engineering expertise
- Inhalation know-how
- Dry Powder Inhalation Devices Design



Develop partnering opportunities

- Licensees
- Co-development with synergetic technologies
- Investors to pay for clinical development

PDL Product Pipeline



Agenda

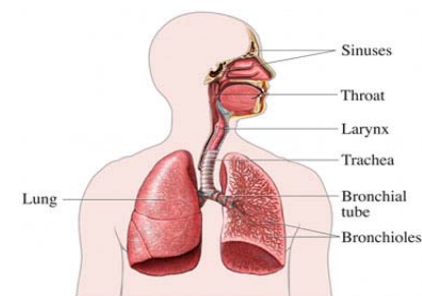
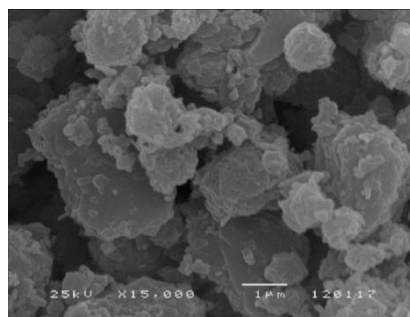
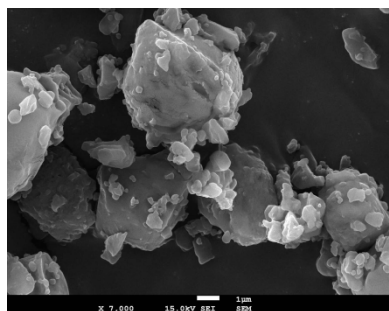
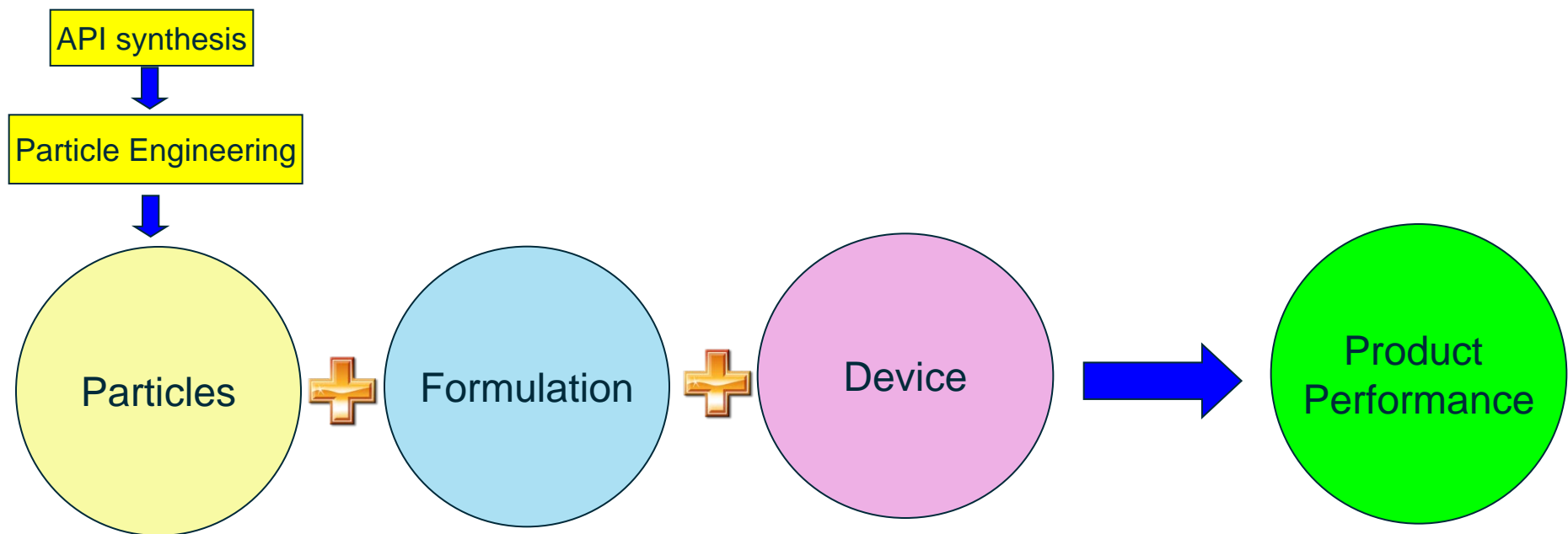
Hovione then and now

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Integrated approach to pulmonary delivery

Dry powder inhalation devices

Integrated Approach to Inhalation



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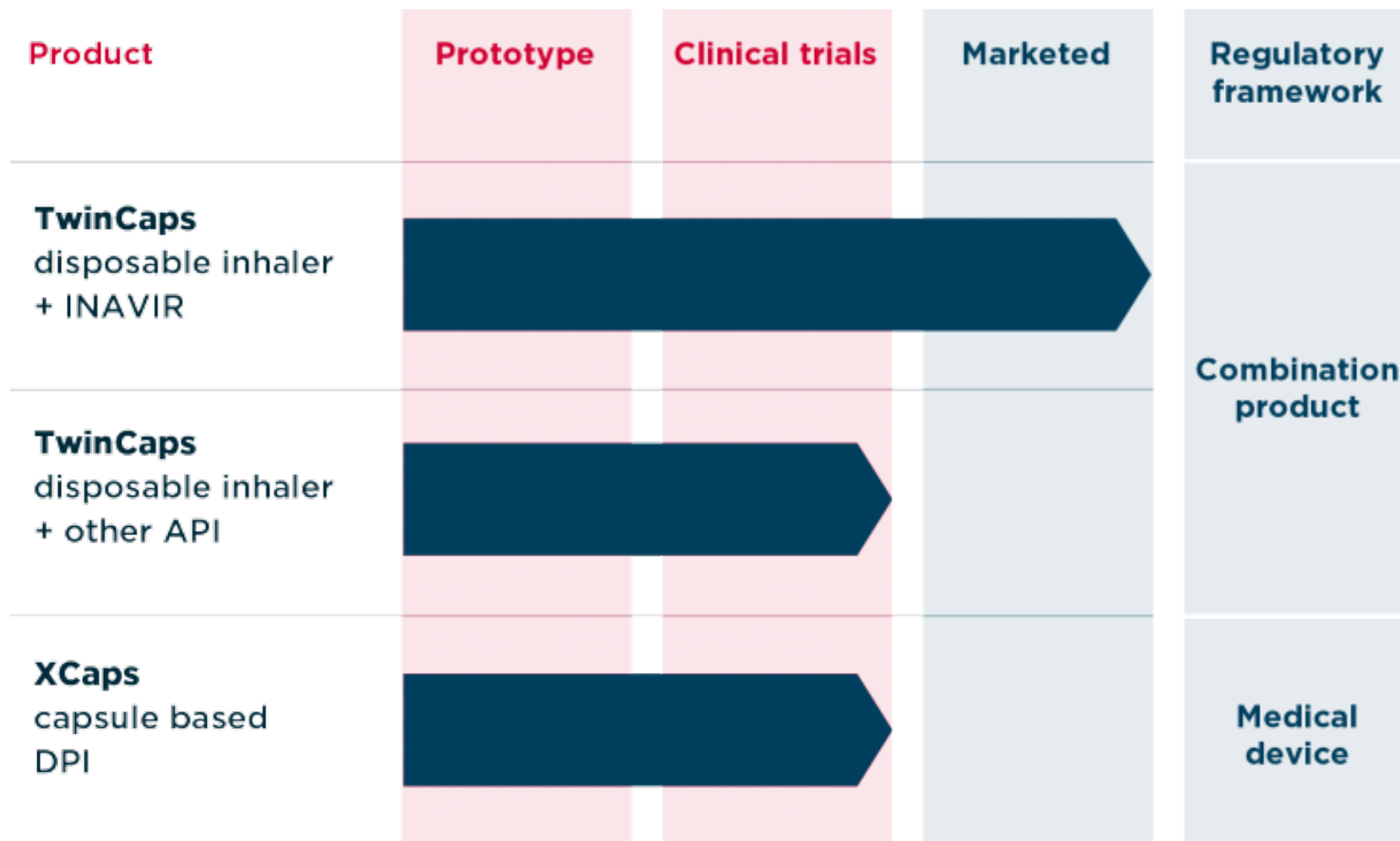
Hovione then and now

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Integrated approach to pulmonary delivery

Dry powder inhalation devices

Dry Powder Device Portfolio



Hovione Dry Powder Inhalers

Key Advantages

- TwinCaps®



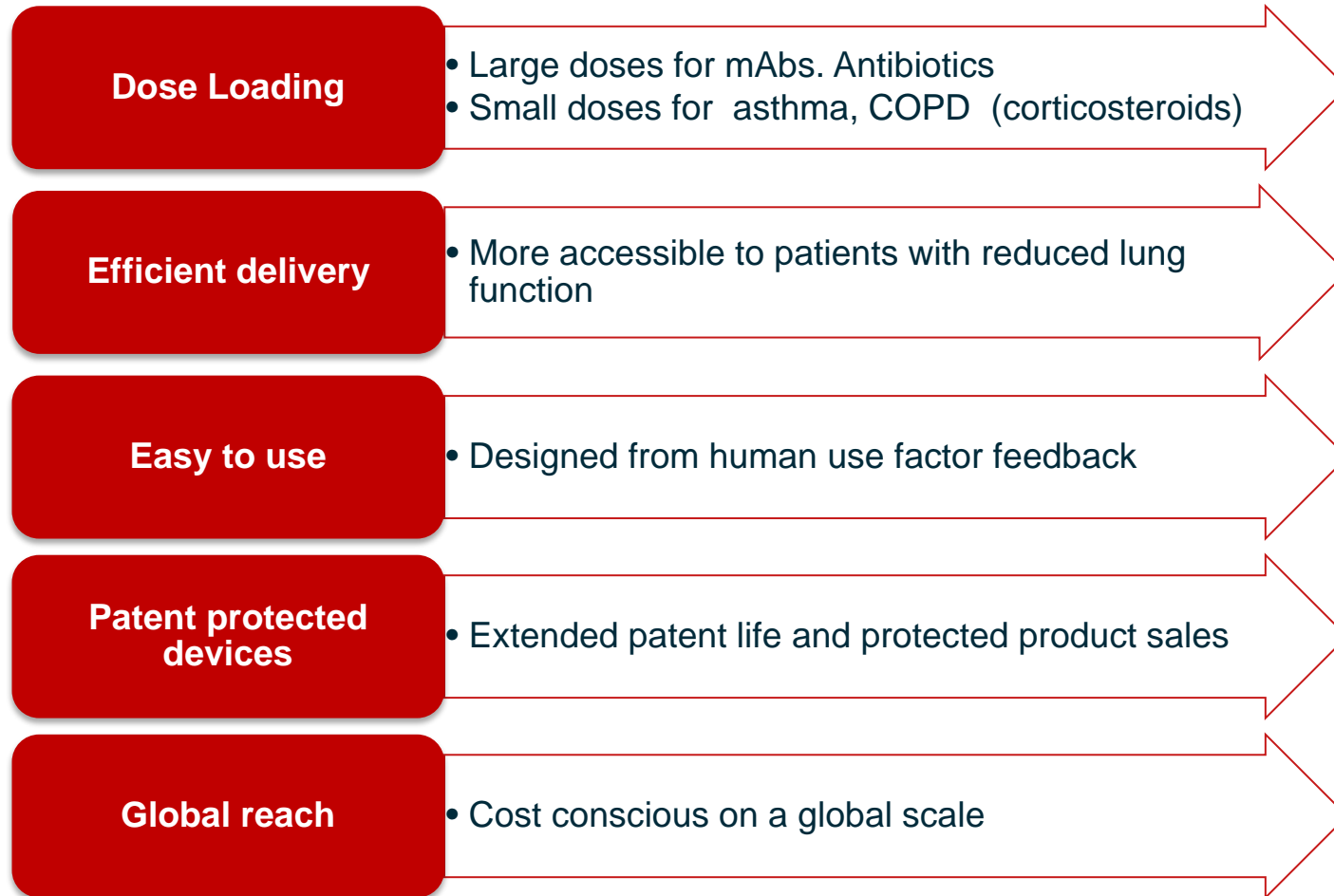
- **Cavity-based**, high efficiency single-use, **disposable inhaler**
- **Market-leader** in Japan– combination product regulatory path
- Acute diseases
- Patent life until 2027
- **Partnering opportunities – vaccines, antibiotics, anti-viral, others**

- XCaps



- **Capsule based** high efficiency **re-usable inhaler**
- Generic or NCE delivered as a stable powder
- Patent life until 2033
- **Partnering opportunities – asthma, COPD, CF, others**

Benefits of Hovione inhalers



Thank you for your attention.

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