

# Refueling the vaccines innovation engine

National Vaccines Advisory Committee

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# Introduction

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## Background

We observed key unmet needs remaining for vaccines-preventable infectious diseases

We heard several open questions on the state of innovation in the vaccines industry

We sought to build a robust fact base and perspective to inform the dialogue on challenges facing the industry and potential solutions to overcome these barriers

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**Vaccines manufacturers**

**Policy makers**

**Global public health organizations**

**Payors**

**Regulators**



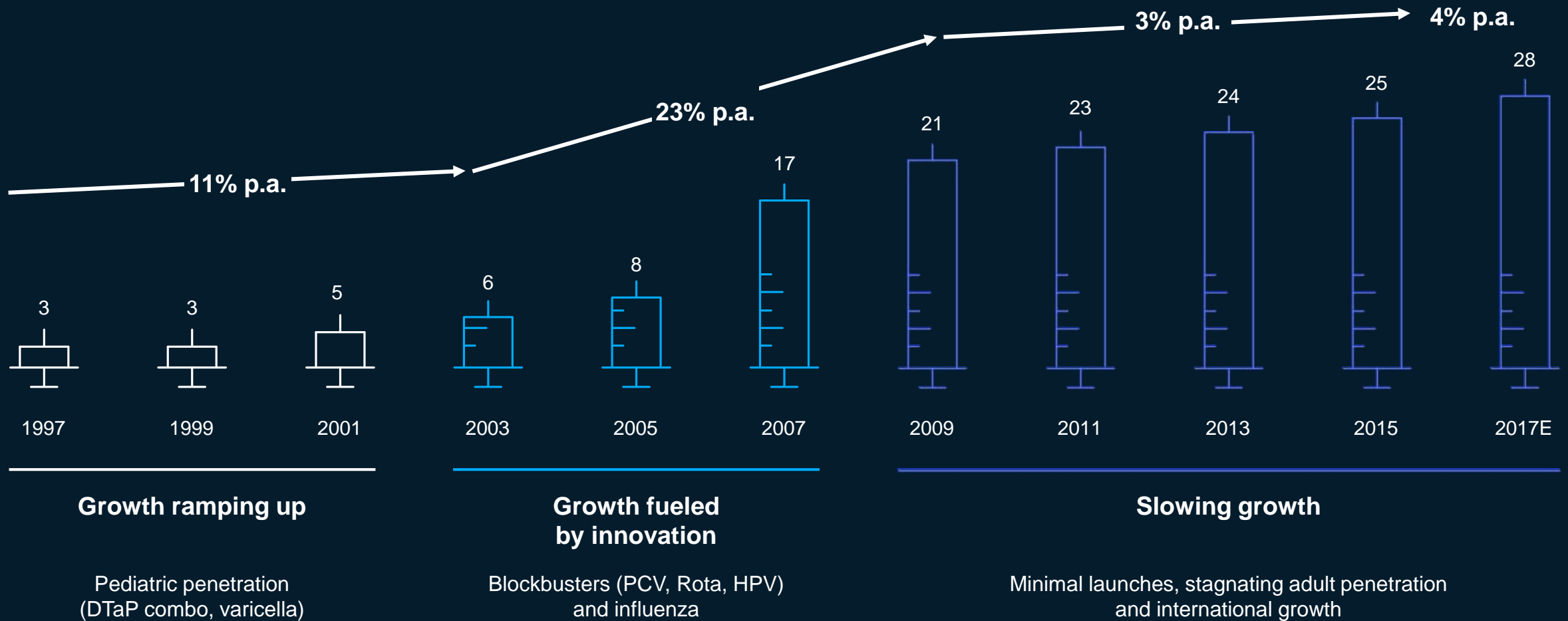
**Current state of innovation**

McKinsey & Company's report published in May 2019:  
*Refueling the vaccines innovation engine*

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# After a period of rapid growth, global vaccines sales have slowed in recent years

\$ billions



**Reinvigorating  
vaccines innovation  
will require  
addressing three  
underlying issues**

- 1 Increased investment requirements**  
for R&D and manufacturing creating a higher hurdle rate
- 2 Less attractive economics**  
as vaccines success rates converge with biologics  
but peak revenues are lower
- 3 Higher technical complexity and  
commercial uncertainty** compared to recent  
innovations (for example, pneumococcal, HPV)



# Vaccine innovation archetypes

	Description
<b>1 High income + nosocomial</b>	Target high-burden diseases with large potential patient pools
<b>2 Potential blockbusters</b>	Target high-burden diseases with large potential patient pools
<b>3 Treatment vaccines</b>	Used to fight an existing disease/condition, rather than a preventative measure
<b>4 Incremental improvements</b>	Improve existing vaccines to address unmet needs (e.g., efficacy, duration, ease of use)
<b>5 Emerging threats</b>	Target emerging epidemiology threats and future priorities for innovation
<b>6 Low income</b>	Target diseases with higher burden in low-income markets

Technical feasibility	Commercial potential
Moderate	Moderate
Low	High
Moderate	High
Low	High
Moderate	High
Moderate	Low
High	Low
Moderate	Low
Low	Low
Moderate	Moderate



# Potential solutions to re-fuel vaccines innovation engine

## Demand clarity

Provide increased commercial certainty for manufacturers by identifying the priority innovations to address unmet market need

## Economic incentives

Create additional incentives for priority innovations

## Value communication

Proactively articulate priorities and value associated with material improvements to an existing standard of care

## Collaboration and data sharing

Improve transparency and data sharing to overcome technical challenges and achieve breakthroughs where most needed