NEW PRODUCT PLANNING Summit

TPP Development & Indication Prioritization

Erik Holzinger groupH

October 2023

‘How wonderful that we have met with a paradox. Now we have some hope of making progress.’

Nils Bohr, Danish Physicist
1885 - 1962

Indication Prioritization & TPP Development

1. Why Am I Talking to You?
2. … an Indication Prioritisation Case Study
3. … a TPP Development Case Study
4. Hints & Tips
5. Q&A

Why am I talking to you?

Stakeholder 1
Investors

Defining *The Ask*

Commercial Story

Stakeholder 2
Potential Partners

Stakeholder 3
Yourself and Your Colleagues

Can we identify big successes?

?

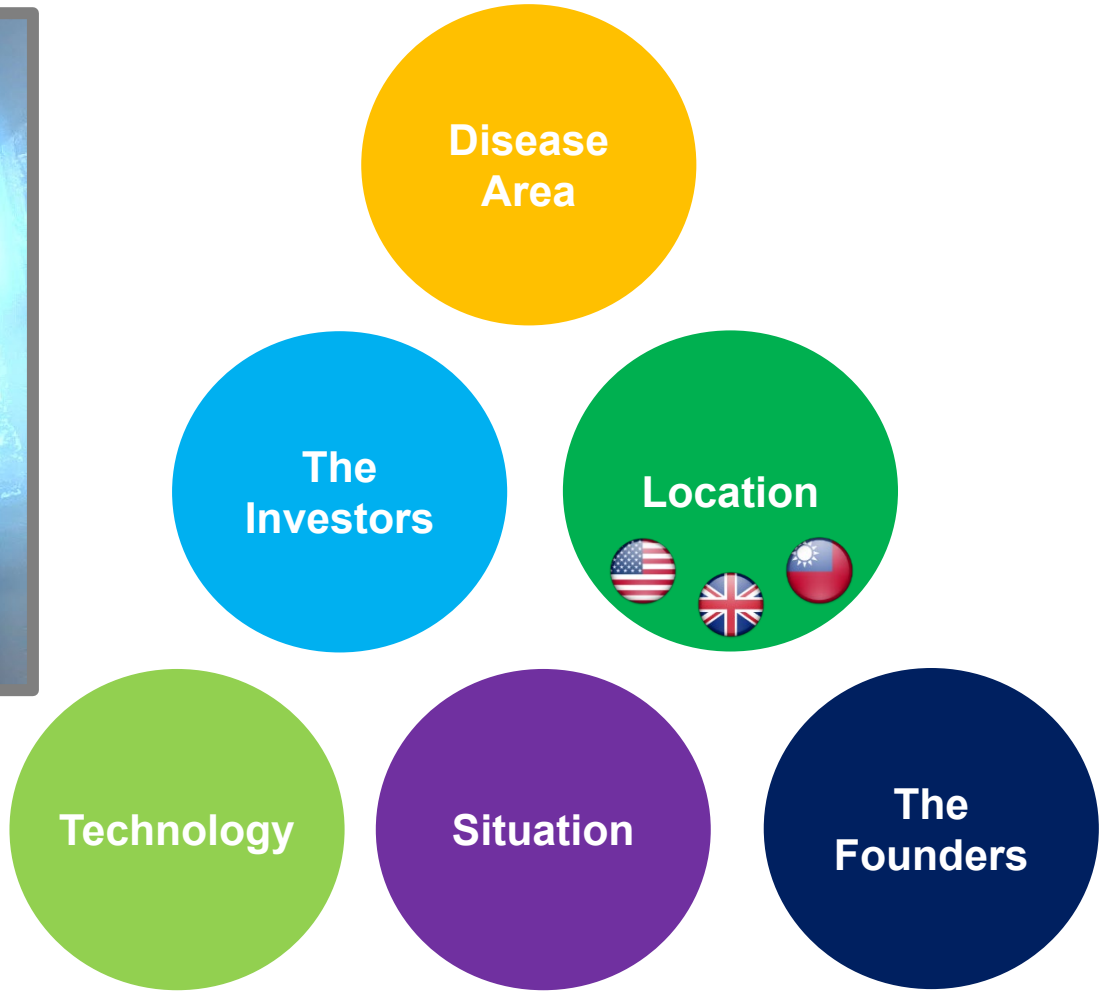
Can we identify the failures?

Source: groupH research & analysis

Introducing the company in 1 minute …

Jack Castle
Corporate Strategy & BD
Ochre Bio

ochrebio



Source: groupH research & analysis

Source: groupH research & analysis

Indication Prioritization is (a bit) like Dating…

Module 1

Kick-Off

Step 1

Information Gathering

Step 2

Interim Meeting

Outputs of Module 1 will inform Module 2

#41

1. MOA Fit
2. Research Capability
3. Clinical Trial Ease
4. Commercial Attractiveness

#22

#6

Create Universe of Indications

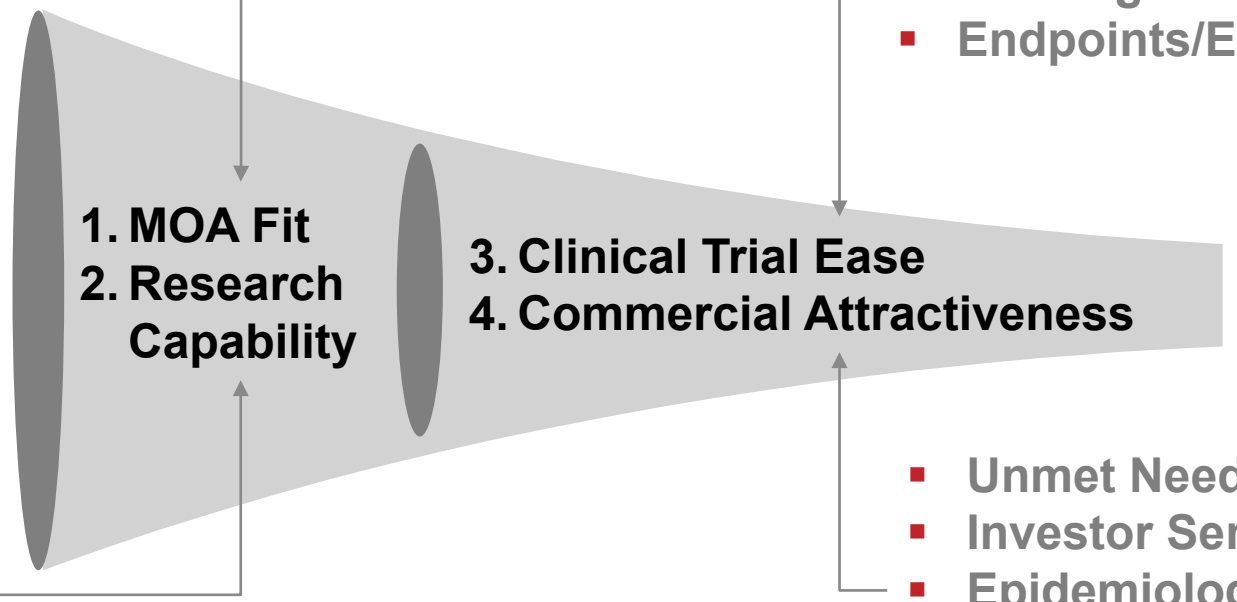
Sources

- Kill Indications ASAP
- KO criteria / Scores
- Competitor Analysis
- Desk research & databases
- Internal survey + interviews (n = 5)
- Limited PMR (General Hepatologists)

A Closer Look at Our Criteria

Fit of
Hepatocytes
GalNAc
with indication

Fit of
Infrastructure
Equipment
Staff
Time
Resources
Experience
with indication

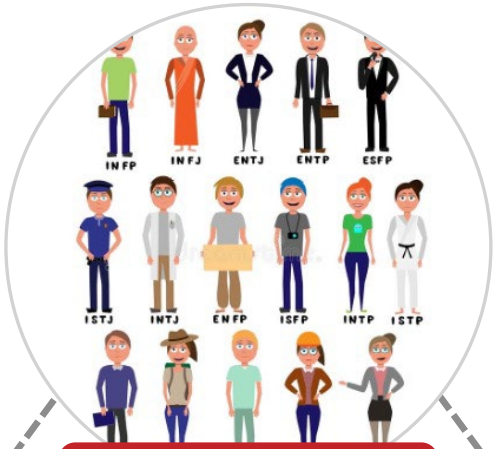


- POC
- Pivotal
- Existing Pathways
- Endpoints/Enrolment

- Unmet Need
- Investor Sentiment
- Epidemiology
- Competitive Intensity
- groupH View

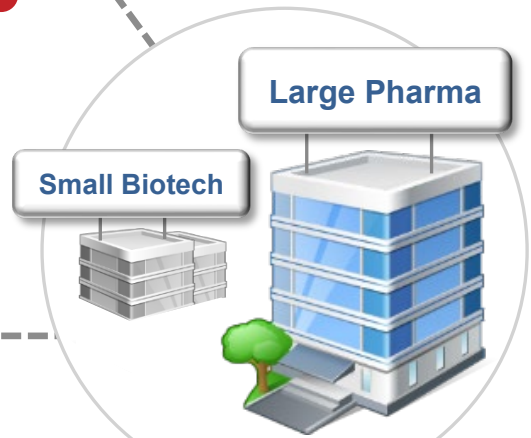
It’s not just a process: People and Organisations

illustrative



MBTI Types

C.G. Jung’s Archetypes



Organisation Size / Culture / Structure

Source: groupH

A real case study is rarely a straight line from A to B

illustrative

Initial Contact

Kick-Off

Internal Survey & Interviews

Alignment or misalignment or gaps

1st Cut

2nd Cut

Painful decisions in cold daylight

Interim Meeting – Alignment on Top-6

Team Alignment / Consensus / Critical Review & Devil's Advocate

Value Proposition Development

PMR Physicians

Promotors / skepticism

TPP Development

PMR Payers

Pricing Insights

Commercial Insights

Commercial surprises or disappointments

Final Meeting Lead Indications Alignment

focus / increased certainty

Source: groupH

Source: groupH research & analysis

Indication Candidate Profiles x 6

Module 1 Output Indication Candidate X

Ochre Rating*

MOA	4
Research Capability	2

Time to IND
- Time

groupH Rating

Disease Description
- Comments

Epidemiology
- Desk research & analysis
- Prevalence & Incidence
- Mild / Moderate / Severe Patient Segments

Ease of Clinical Trial
- Desk research & analysis
- Clinical Trial precedents and analogues?
- KOL hepatologist comments
- Other insights from advisory boards and internal interviews

4

Segments
- Comments

Unmet Needs
- Existing Standard of Care
- Comments and ratings from physician interviews

Commercial
- Desk research & analysis
- Analyst reports and forecasts
- Commercial databases
- Epidemiology and unmet needs
- Investor sentiment
- Pricing potential

2.5

\+ Summary of positive drivers

\- Summary of negative drivers

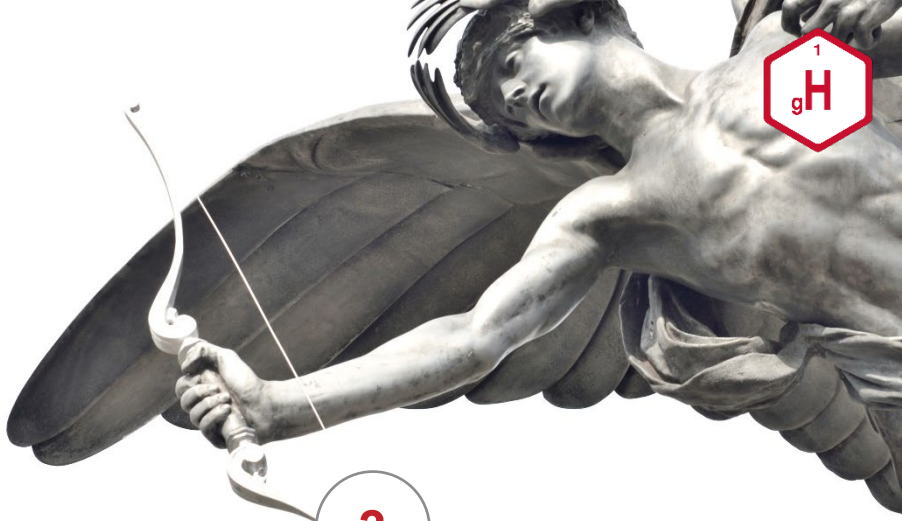
Partner Interest
- Comments

FDA ODD
- Comments

Strategic Fit
- Comments

3

Hints & Tips



1. Attractiveness Criteria may vary
2. Indication ‘Universes’ can be large – wielding the axe
3. Don’t be precisely wrong with commercial potentials
4. Structure & Templates help to expose gaps in understanding

Source: groupH research & analysis

Value Proposition Development & Refinement

Module 2

Interim

Information Gathering / PMR Physicians and Payers

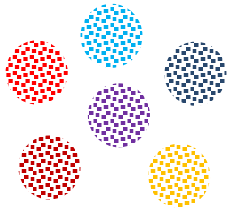
Step 3

Final Review & Discussion

Step 4

Develop 2 – 4 VPs by indication

Refine VPs to TPPs Build high-level revenue potential



#6 Indications

~18 Value Propositions

~6 – 8 TPPs

Sources

- Refine Indications
- Develop VPs / TPPs
- Commercial Potentials
- Desk research & databases
- Analogues / AI
- PMR ~9 KOL (indication experts) doctors & 3 payers

We drafted 1 – 3 Value Propositions for each indication

illustrative

Value Proposition – Product A

Features	Product A Value Proposition	
Indication		
Patient Populations		
Product Type		
Formulation / Administration		
Trial		
Efficacy/Outcomes	• Primary Endpoint: • Potential Key Secondary Endpoints • Other:	• Potential Other Secondary Endpoints:
Safety		

Source: groupH research & analysis

Which materials were developed? – Granular Indication Landscapes

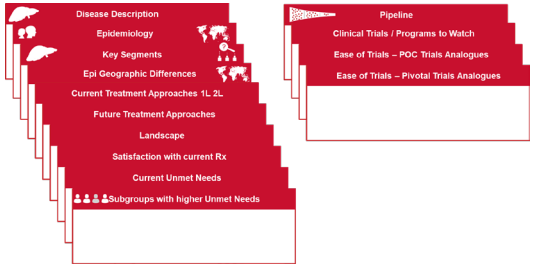
- Disease Description
- Epidemiology
- Key Segments
- Epi Geographic Differences
- Current Treatment Approaches 1L 2L
- Future Treatment Approaches
- Landscape
- Satisfaction with current Rx
- Current Unmet Needs
- Subgroups with higher Unmet Needs

- Pipeline
- Clinical Trials / Programs to Watch
- Ease of Trials – POC Trials Analogues
- Ease of Trials – Pivotal Trials Analogues

By Top-6 Indication

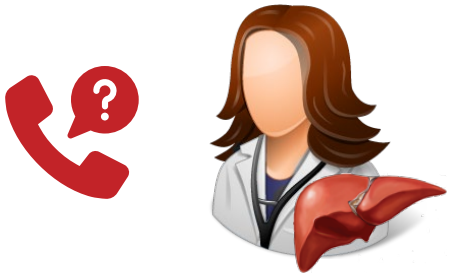
Source: groupH research & analysis

Materials and Value Propositions were in-depth discussed and finally validated



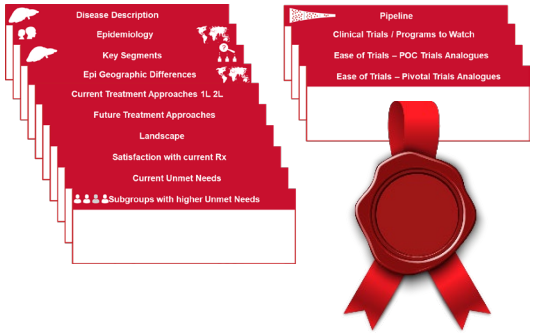
~6 Indication Landscapes

~12 Value Propositions

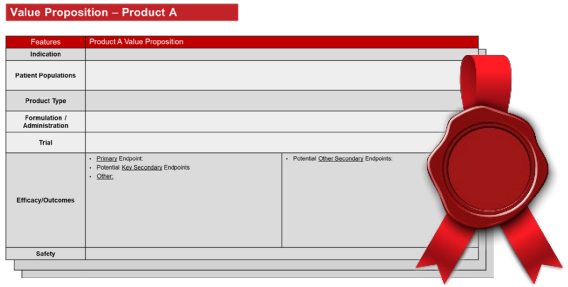


~9 KOL Hepatologists

~3 Senior Payers



~6 Validated Indication Landscapes

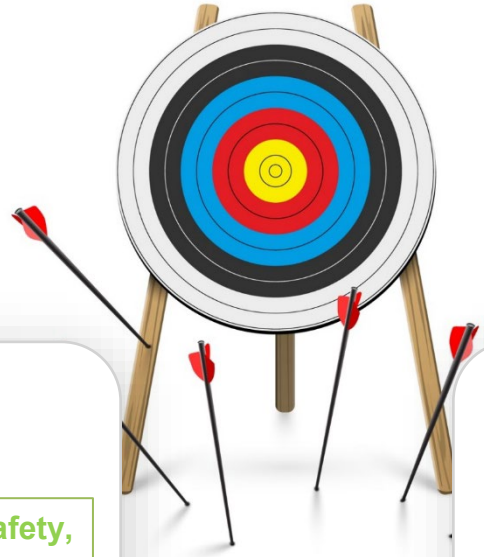


~6 TPPs

Source: groupH research & analysis

Building the plane while flying…

illustrative



*What the **treatment** will look like…*

- Preventative / Preemptive / Curative or Chronic?
- Monotherapy or Combination?
- Technology Platform
- Focus on Safety, Efficacy or Other?
- Companion Dx Administration form Dosing
- Which targets can we address with our technology and our capabilities?

*…and which **patients** are meant to be treated*

- All Comers or Mild / Moderate or Severe Segment?
- Which Killer Insight and Unmet Need are we Addressing?
- Rare Disease or Prevalent Disease?
- Competitive Segment or Niche?

… can we differentiate vs. SoC?

… will doctors recognize clinical value?
… will payers see payer value?
… will patients experience their needs met?

Source: groupH research & analysis

The commercial attractiveness was described in a one-page peak sales calculation and a Commercial Summary put together for each indication

One-Page Commercial Case per TPP

illustrative

High Level Sales Potential – Indication XXX

		Epidemiology for Hospitalised XXX Patients				Launch Date	Ex-man. Net Price per treatment	Peak … (penetrat… potential)	…0, $m
	Positioning	US		EU Top-5					
XXX	Product A – All Comers (Favoured by Doctors)	# of Hospital Admissions for XXX: 158,000	Drug Treatment Rate with Novel Rx: 80%	# of Hospital Admissions for XXX: 150,000*	Drug Treatment Rate with Novel Rx: 80%*	2030	US: $35,000 EU5: $100	US: 40% EU5: 40%	US: 1,770m EU5: 5m
	Product B – High Risk XXX	79,000	90%	75,000*	90%*		US: $55,000 EU5: $37,500	US: 40% EU5: 40%	US: 1,564m EU5:1,013m
Upsides	A Upsides in not included geographies B Use in non-severe XXX segment (not discussed with KOL doctors)						**Total Peak Sales Potential, $m**		**Product A = $1,775m** Product B = $2,631m (theoretical)

Scope to expand to other indications

- The overlapping pathophysiology between XXX and XXX could offer XXX compounds to be repurposed and expand to XXX (see GSK compound in pipeline section)

Other Forecasting Assumptions

- We assume Product X will become SoC but while the pipeline is only moderately busy there might be other products competing in XXX. We assume at least one other competitor in the XXX space
- Epidemiology for XXX is based on XXX presentation from May 2023, we assume that the majority of hospital admissions for XXX are XXX but not 100% (no data currently on share of XXX ≥32 among hospital admissions)
- We assume 50% of XX hospital admissions are of particularly high-risk because of co-morbidities
- Peak penetration assumed to be achieved after 10 years
- Peak penetration assumed as entrant #2 in a market of 2 products with an XXX label
- *groupH estimate, requires validation

Commercial Summary

illustrative

XXX – Commercial Summary

Key Facts

- XXX XXX (XX) is the most severe form of XXX XXX happening in patients who drink excessively causing 80% of hepatotoxic deaths and 50% of XXX cirrhosis
- Severe XXX XXX (XXX, XXX > 21, XXX ≥32) can develop suddenly and quickly lead to XXX failure and death at a 90-day mortality of 30-50%
- XXX patients present with a subacute onset of fever, hepatomegaly, leukocytosis, marked impairment of XXX function and manifestations of portal hypertension (e.g. hepatic encephalopathy)
  - Prevalent comorbidities include infection, sepsis, acute renal insufficiency, gastrointestinal bleeding and malnutrition
- > 50% of XXX survivors are re-hospitalized within a year and nearly 75% through the second year

- In the USA, XXX XXX disease affects more than 2 million people; approximately 1% of the population
- XXX is responsible for 158,000 hospitalizations / year of which most due to XXX

- Prognostic scores (XXX, XXX, GXXS, DF, Lille) indicate mortality risk and response to corticosteroid treatment; XXX and Lille score are most widely used
- All hospitalized XXX patients are critically ill and at high risk of mortality
- An even higher risk of mortality is associated with comorbidities such as obesity, renal dysfunction, T2D, CV conditions, infections, sepsis, corticosteroid ineligible and corticosteroid non-responders

- There is no drug treatment to cure XX or XXX; long term treatment involves helping with abstinence, easing symptoms and to prevent/slow disease progression
- Acute XXX requires hospitalization and some patients will also need ICU support
- Acute treatment involves alcohol withdrawal, providing hemodynamic and nutritional support, Infection surveillance and gastric mucosal bleeding prophylaxis
  - 1L Drug Treatment: corticosteroids (off-label)
  - 2L Treatment: potential XXX transplantation, eligibility <3%

- No approved drug products and a limited pipeline
- GSK is considering investing in an XX program for GSK-XXX (XXX modulator (RNAi), currently Ph2 NASH
- XXX, XXX, XXX, XXX, XXX, XXX in Phase 2 are main contenders, 2 other compounds in Phase 1

Unmet Needs

- Satisfaction with current treatments in XXX is very low as corticosteroids… lived benefits of up to 4-weeks or don't work at all
- Reducing short-term mortality is by far the most important unmet need

Physician and **Payer** Feedback Ochre Value Propositions

TPP Feedback

- Highly attractive TPP
- Broad-label, XXX>32 trial recommended
- Allcomer population preferred over high-risk population for PoC
- Primary endpoint: a relative reduction in mortality by min. 10 - 20%
- Other secondary endpoints accepted
- Allcomer TPP A preferred over HR TPP B

Trial Ease (PoC/Pivotal)

- Quick 28-day PoC trial against historical controls or placebo (~20 – 50 pts)
- 3-months randomized, pivotal trials in 2b or 3 (~2-300 pts.)
- Safe product needed due to low patient tolerance

Peak Sales Potential 2040 – Allcomer TPP

- Launch 2030
- PY share = 40%, XXX Entrant #2
- US: 158k, EU: 150k XX hospital. / year
- 80% of all XX admissions drug treated

$1,770m | $5m (CS)* $1,013m**

Indication Feedback

- High burden in XXX and unmet need for an alternative to off-label corticosteroid therapy for XXX accepted

TPP Feedback

- Patient selection of XXX>32 accepted
- Proposed regimen highly attractive
- Clarity needed if monotherapy or add-on
- Primary and secondary endpoints seem complete; hospitalization a big cost driver
- US payers accept trial vs. placebo if ok with FDA, EU payers demand trail vs. CS for monotherapy

Coverage

- US: Coverage likely with PA, CS not seen as price comparator
- EU: Coverage likely, if CS deemed formal comparator and no H2H, price negotiations could be more challenging

Pricing Potential

- US: **$35k** per treatment (WAC, net)
- EU: **$100** per treatment if compared to CS, $35k if compared to LT or G-CSFs

Source: groupH research & analysis

Hints & Tips

1. Indication Prioritization + TPP Development = Closely Linked
2. Viable TPPs are a jigsaw

   Love at first sight is rare
3. No progression without deeper understanding
4. Few Short-Cuts once down to Top-6

Our Experience of AI in Commercial Analysis so far

1. AI currently has the role of a 1st year analyst
2. PMR and Data Analysis in this area not very data-heavy
3. Screening in/out + Judgements + Killer Insights = Human Intelligence
4. AI in Hypothesis Generation for Analogues

Future
Synthetic Patient
Synthetic Doctor

Summarizing the project outcomes in 1 minute …

ochrebio

Jack Castle
Corporate Strategy & BD
Ochre Bio

Discussion
+
Q&A

Appendix

Early-Stage Specific Tools

MAPPI
PAYER VALUE UNCERTAINTY

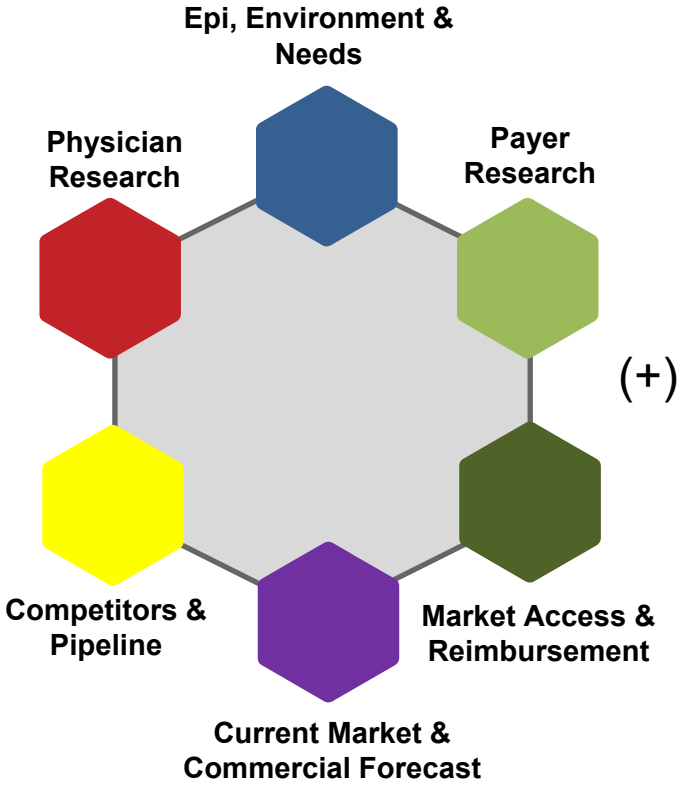
GROSS TO NET

DEVIL'S ADVOCATE

EARLY-STAGE FORECASTING

IMPACT Rx IRA

"Children are not small adults" - Early-stage work is different to working at later stages of the product life-cycle



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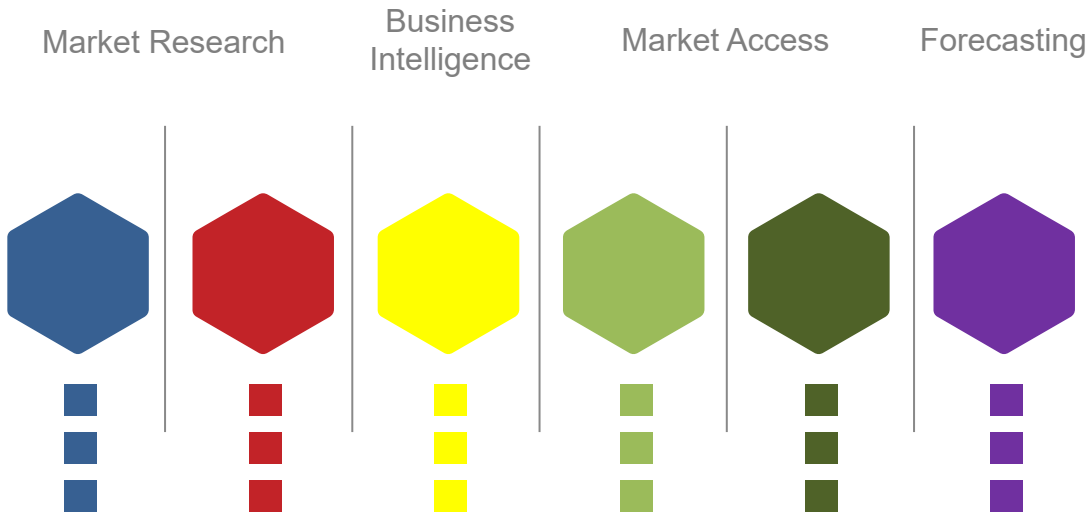
Regulatory

vs.

Departmental + Functional Silos



- **> # of compounds**
- **< budget per compound**

vs.

- **< # of compounds**
- **> budget per compound**

Source: groupH research and analysis

Pipeline Commercial Teams are Shaping the Asset Development through Stage-Appropriate Strategies

Indication Strategy

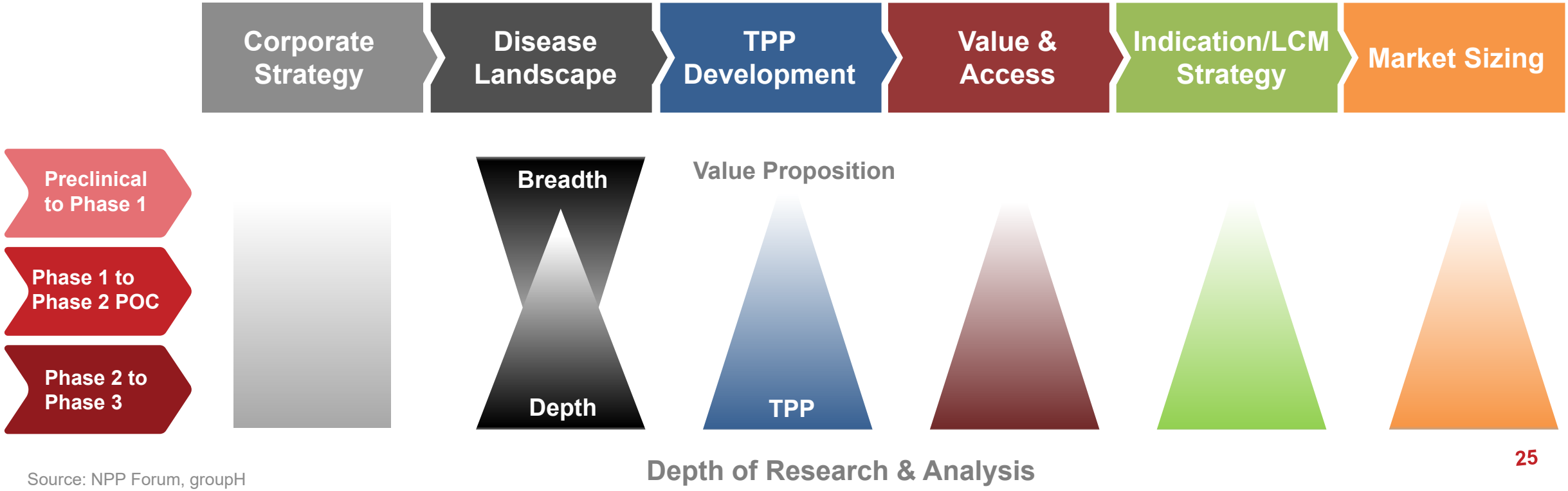
Go / No-Go to POC Trial

Go / No-Go to Reg. Trial

Source: Biopharma New Product Planning Network

For Early-Stage programs the set of domains are the same as for later stage programs but the questions and focus may be different

- Across the program development, commercial strategies can be guided by stage-specific questions across a certain **Set-of-Domains** of considerations
- Until first-in-human decision, pipeline commercial teams are focusing on building the asset indication strategy

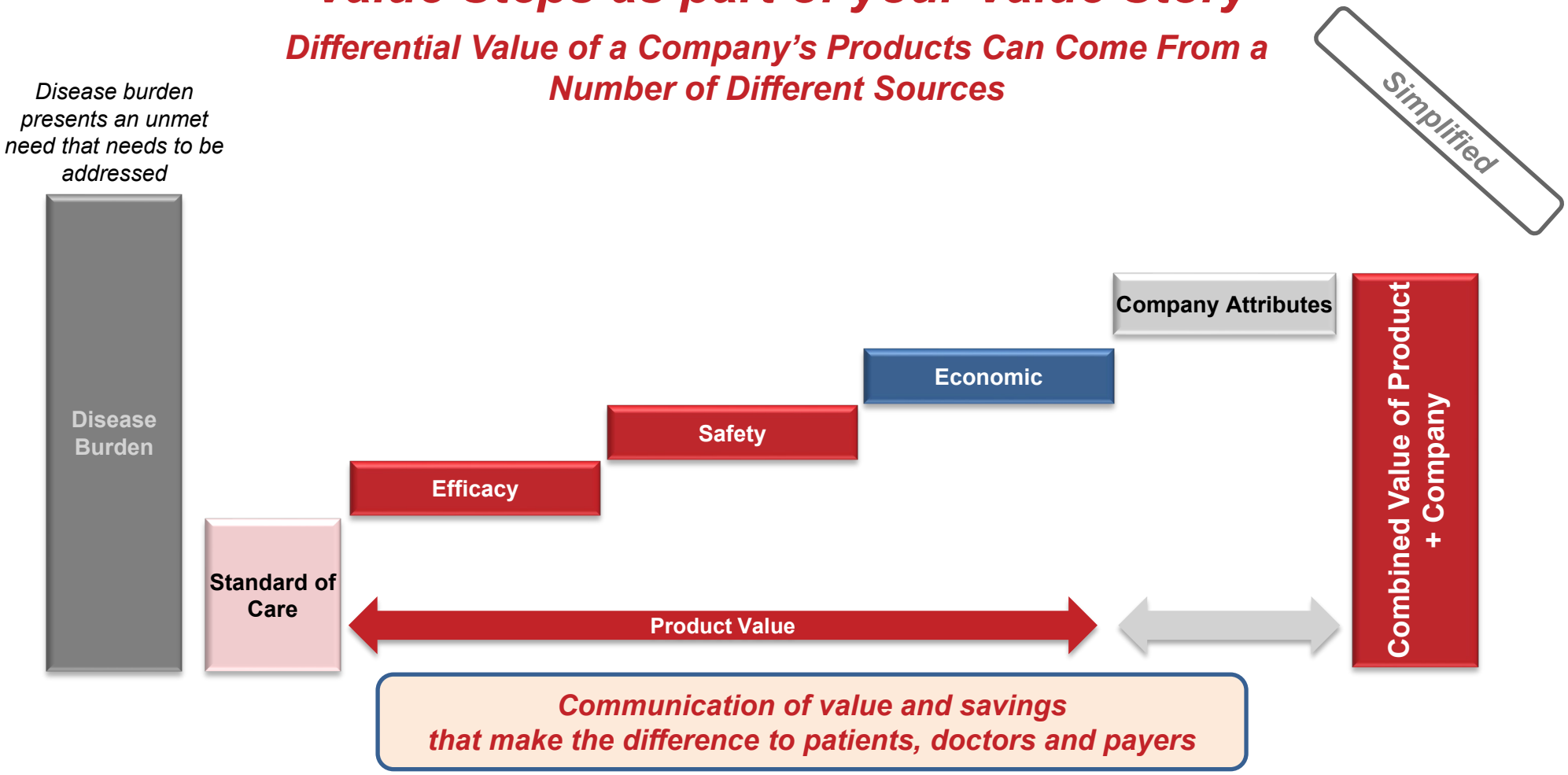


Source: NPP Forum, groupH

Your *Value Story* identifies all the relevant sources of differential value offered by a specific product

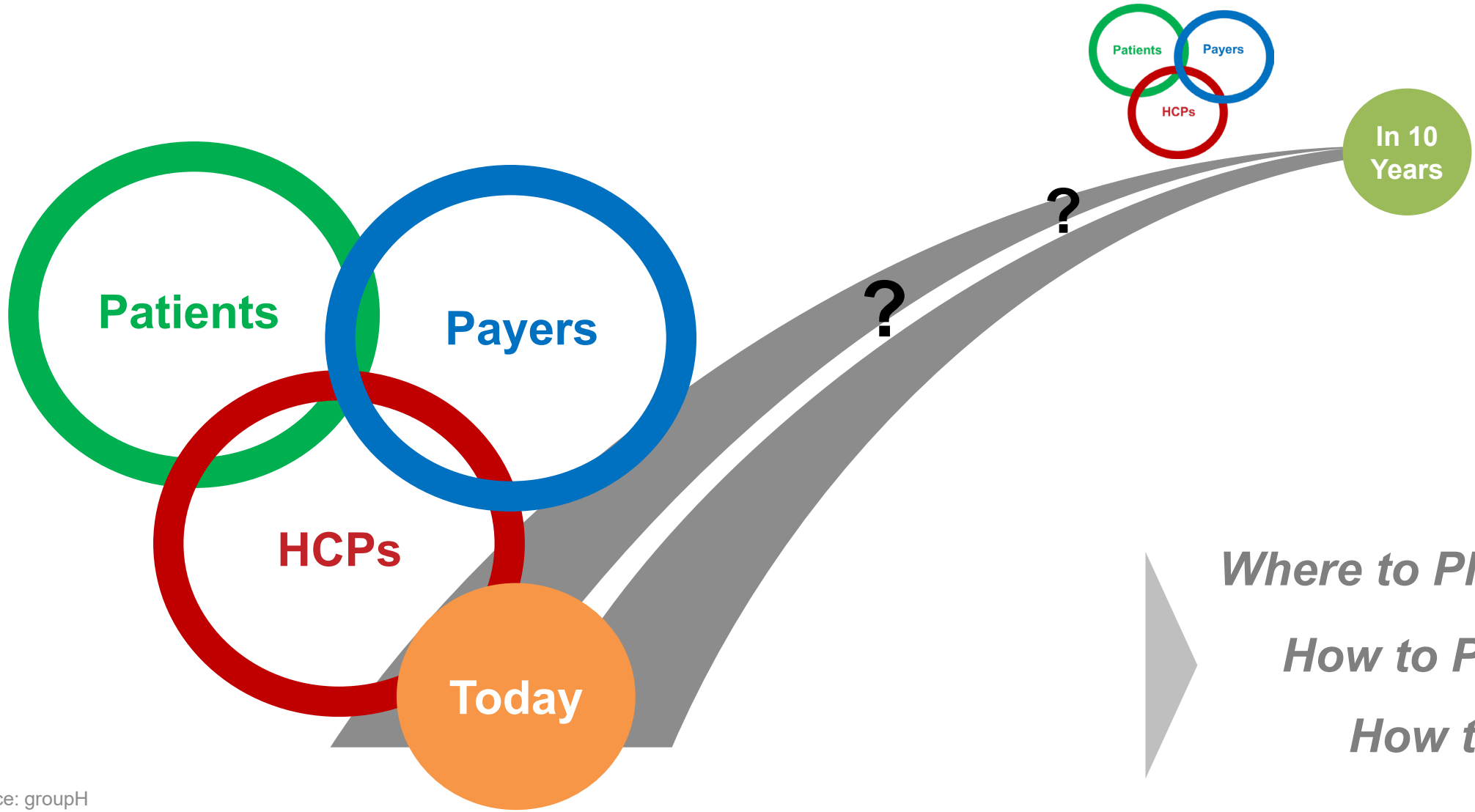
Value Steps as part of your Value Story

Differential Value of a Company's Products Can Come From a Number of Different Sources



Source: groupH, please note: in the context of early-stage development SoC (Standard of Care) typically refers to the future SoC prevailing at the time of launch, emotional, public health and political value not represented in this chart

Long-term *Value Assessments* are complicated by the uncertainty of the future competitive environment and the treatment landscape



Where to Play?

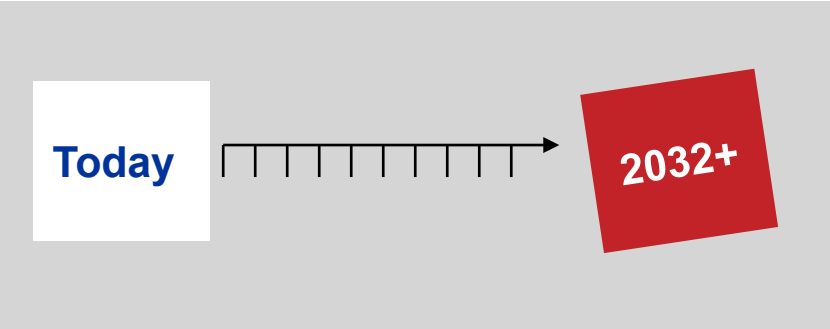
How to Play?

How to Win?

Source: groupH

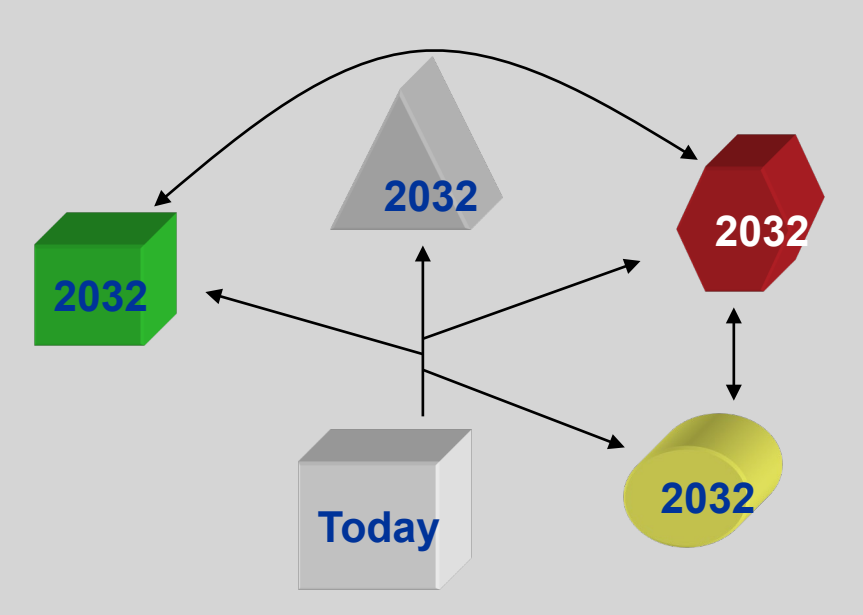
The future is not necessarily a linear extrapolation of the present

Many organisations plan like this…
Forecast a linear extrapolation of past trends



"The world will be a little bit different"

Even though the world looks like this…



Payer value uncertainty can be addressed early in order to maximize payer's value perception

If unaddressed, Payers' value perception will likely be impacted

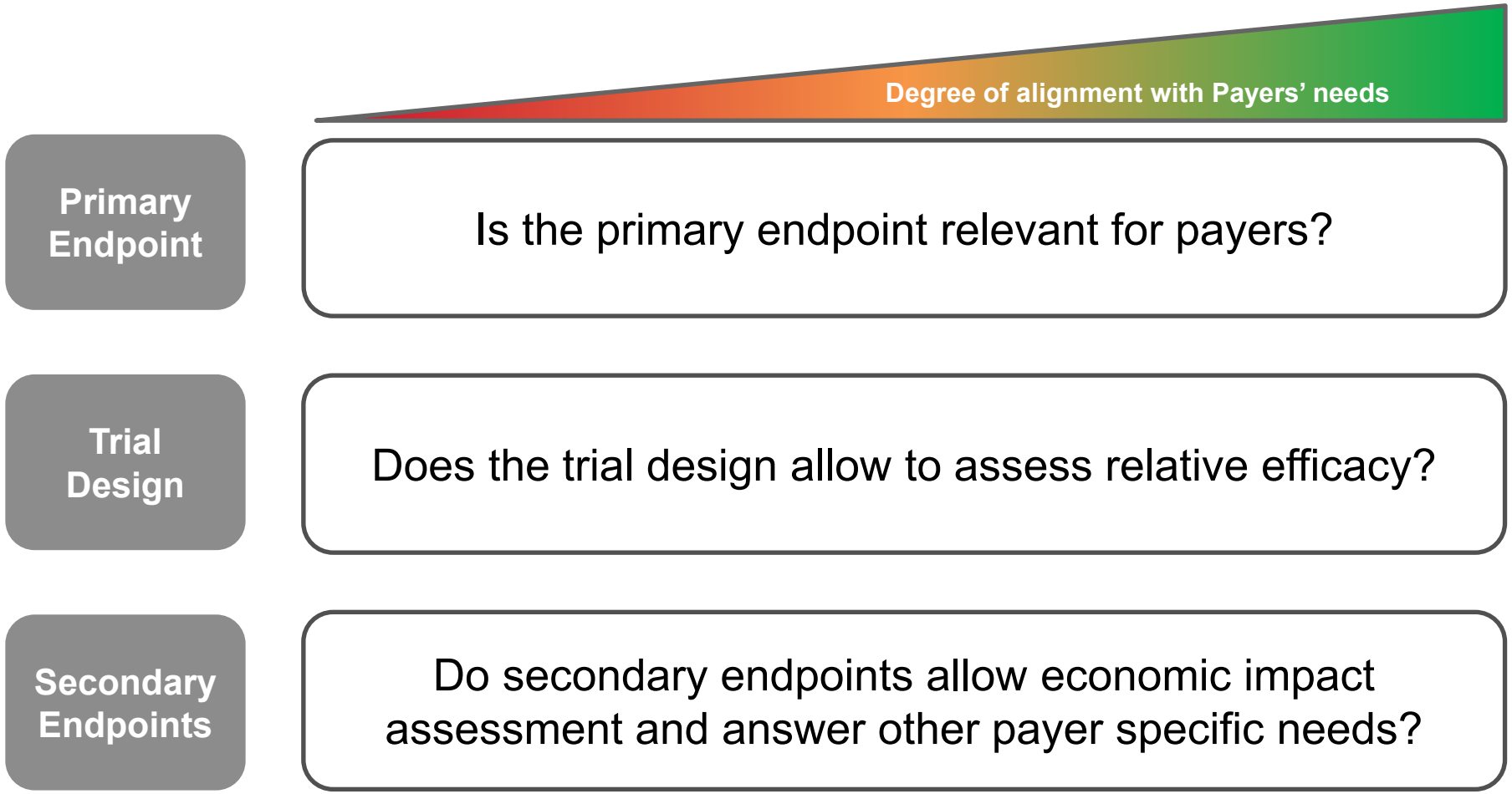
Moderate likelihood of impacting the payer's perception of the product's value

No obvious data gaps impacting the payer's value perceptions

Domains of data relevance for payers

Source: groupH research and analysis

A few questions can help to steer the clinical development strategy to make it fit for purpose for future payers' needs



Source: groupH research and analysis

Module 1 Output
Indication Candidate X

Ochre Rating*

MOA	4
Research Capability	2

Time to IND

- Time

groupH Rating

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Disease Description

- Comments

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\+

- Summary of positive drivers

−

- Summary of negative drivers

Partner Interest

- Comments

FDA ODD

- Comments

Strategic Fit

- Comments

3

Source: groupH research & analysis

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