How do we put advanced therapies into practice in Europe?

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Transforming the effectiveness and sustainability of medical innovation

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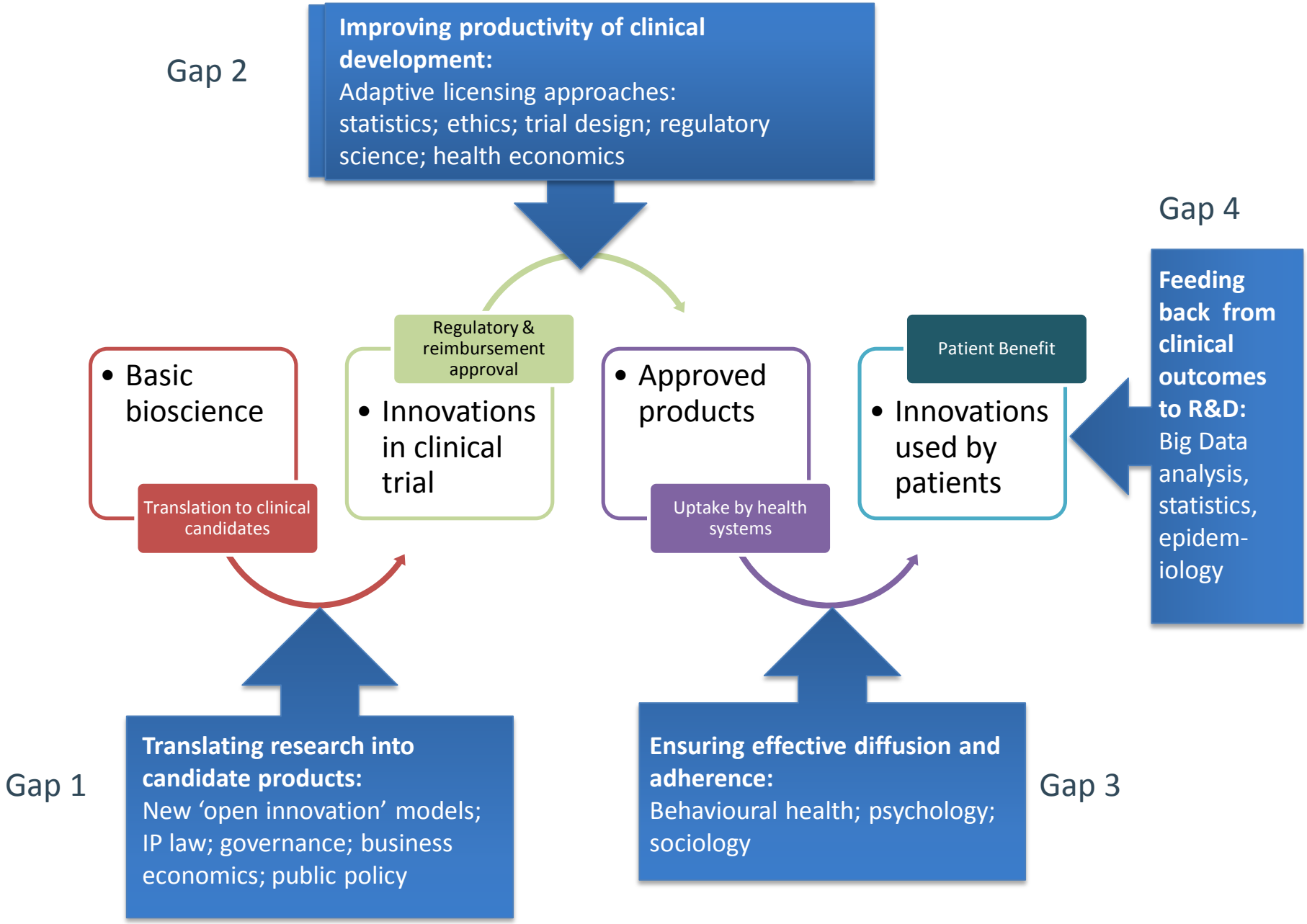
CASMI is addressing the four "gaps in translation"



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Lonza

ATMP Definition – from the UK perspective

An advanced therapy medicinal product (ATMP) is a medicinal product which is either:

a gene therapy medicinal product

a somatic cell therapy medicinal product

a tissue engineered product

A combination ATMP includes 1 or more medical devices or active implantable medical devices, as well as cells or a tissue component.

CAT evaluates combined ATMPs for marketing authorisations, and MHRA for UK clinical trials.

The application for a marketing authorisation for a combined ATMP which contains a medical device should include evidence that the device meets the essential requirements set out in the medical devices legislation

Issues raised by advanced therapies

- Technical: how to ensure consistent standards, manufacture, delivery?
- Trials: what is feasible when target indications rare?
- Regulatory: how to classify and regulate? Relationships between CAT and CHMP? How to regulate a locally managed process rather than a conventional product?
- Clinical: how to incorporate in clinical (esp surgical) practice and train clinicians?
- Reimbursement: how to demonstrate value commensurate with cost?
- Affordability: how to structure pricing when a single shot can bring lifetime benefits?

What do we learn from experience so far?

- Glybera – regulatory process challenges
- Provenge – value challenges

- At European level: CAT and CHMP interplay
- At UK level, multiple bodies involved, sometimes coordinated:

  "All regulatory enquiries about regenerative medicines should go through the MHRA Innovation Office.

  The Innovation Office is the single point of contact for all the regulators involved in regenerative medicines:

  Human Tissue Authority (HTA)

  Human Fertilisation and Embryology Authority (HFEA)

  Health Research Authority (HRA)"
- Other jurisdictions (Japan, Korea) taking a more aggressive approach

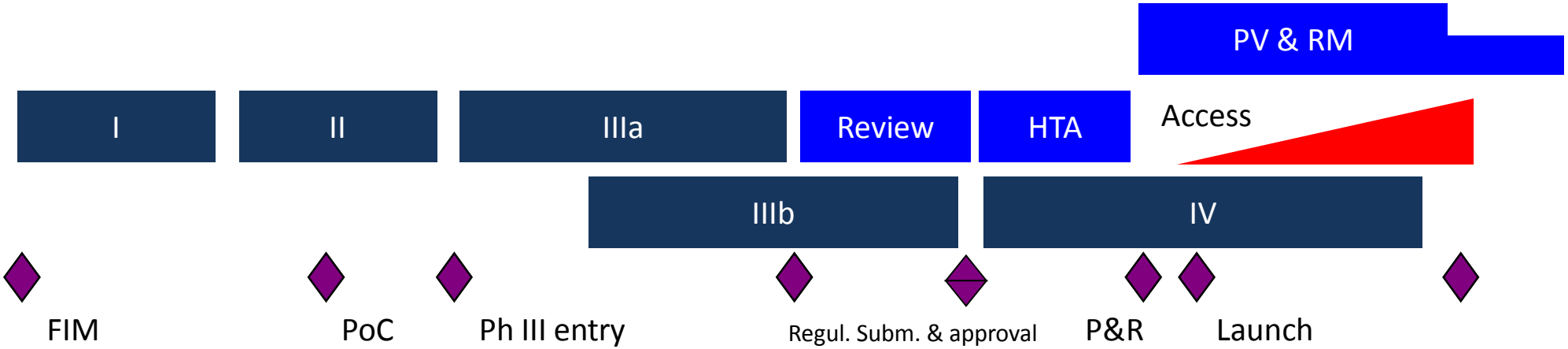
The Glybera experience

- "This lengthy and tortuous approval process raises several questions. Frequent reapplications are very time-consuming and expensive …. led to the demise of Amsterdam Molecular Therapeutics … investors will shy away from supporting biotech companies unless greater clarity and predictability can be achieved in the process of regulatory evaluation and approval.
- The Glybera saga also highlights problems specific to ultra-orphan drugs—because obtaining large-scale phase III data with a very limited number of patients is virtually impossible, procedures to handle these indications must be further developed."

- *NB lipoprotein lipase deficiency is an ultra-orphan disease affecting only one in a million people. According to publicly available information, the clinical results were based on only 27 patients*

Molecular Therapy (2012)

Current development path - poorly adapted



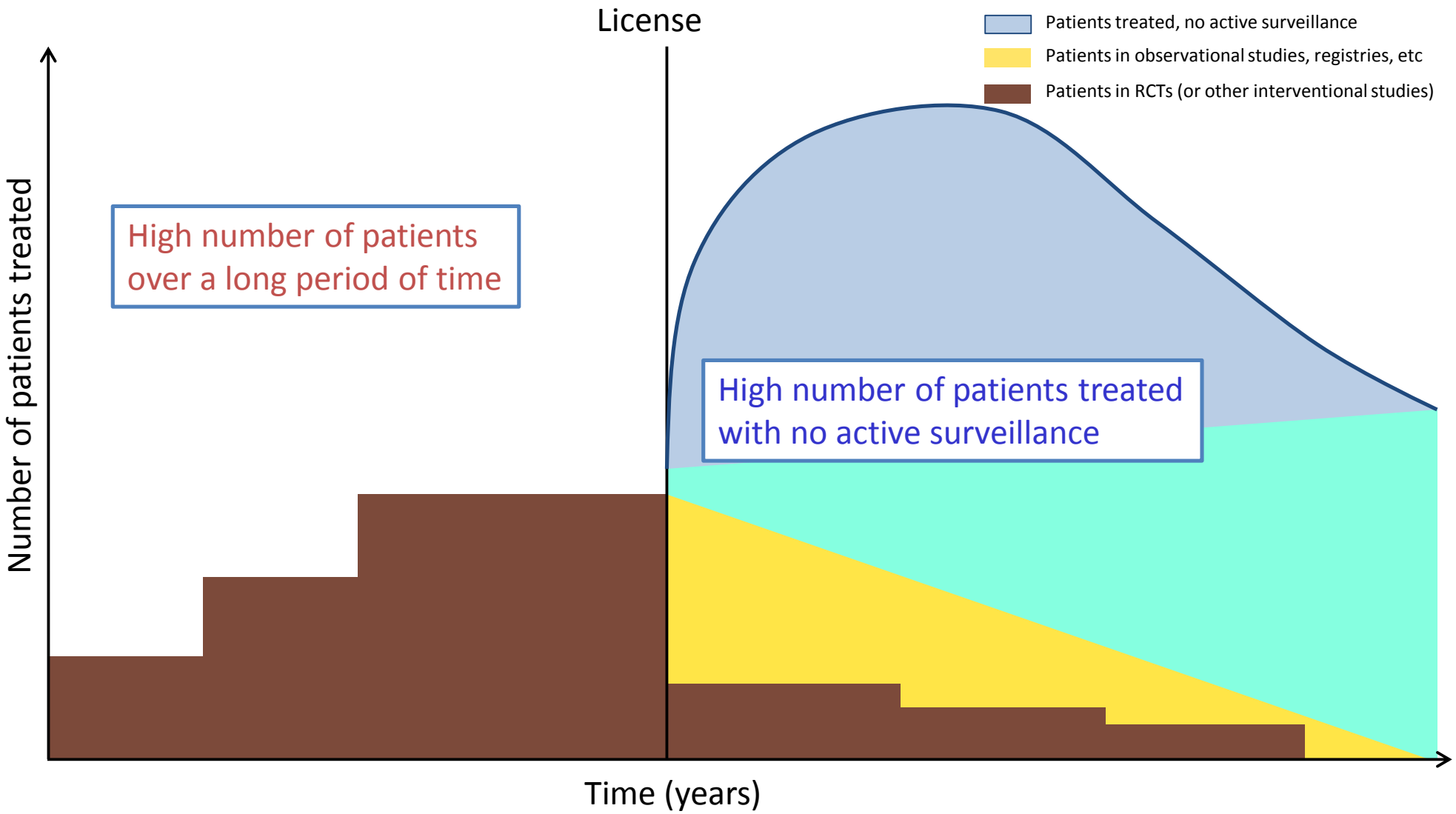
Key characteristics of current model

- Inflexible processes and methods
- Expensive, increasing data demands
- Lack of early alignment between key parties
- Segmented input & decision making
- Access Needs- not designed in
- Patient perspective - not fully addressed

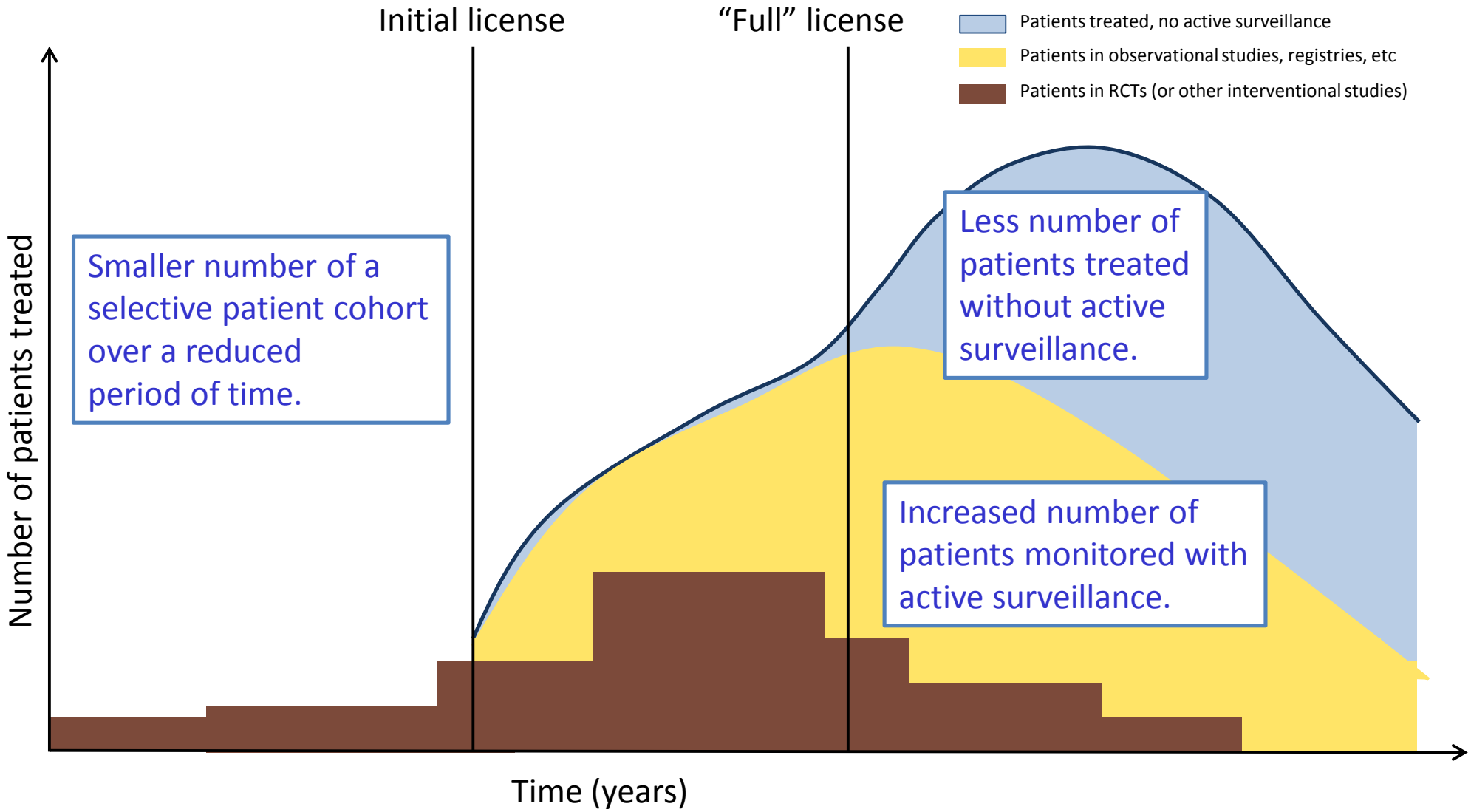
External activities

Sponsor activities

Current pathway



MAPPs: Adaptive pathway



Medicines Adaptive Pathways for Patients (MAPPs)

- Collaborative design of evidence generation plan for high potential medicines
- Selection of likely highest benefit/risk patients
- Early, conditional approval if ‘Phase 2’ data shows that B/R meets threshold
- Collection of safety, effectiveness and value information via real world data
- Adaptive approach to reimbursement based on accumulation of value data
- Wider approval to additional patient populations once greater confidence gained