Evidence Generation for Innovative Oncology Products

Industry Perspective (Janssen)

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Director Global Regulatory Affairs

Evidence Generation - Key Elements and Considerations

Integrated Evidence Generation

Real World Evidence

Regulatory Framework

Value Assessment and Market Access

Stakeholder Collaboration

Janssen –
Move towards Integrated Evidence Generation

RELIABLE DRUG DEVELOPMENT

- Randomized
- Controlled by Placebo or Comparator
- Inclusion/ Exclusion Criteria

“The triumph of clinical medicine has been the randomized clinical trial and evidence-based medicine. That is the gold standard and that's what the clinical world relies upon.” Janet Woodcock, FDA

Randomized Clinical Trials – A Familiar Ground

CHANGING LANDSCAPE

CureTogether
Open Source Health Research

amazon

A PATH TO DISCOVERY DEVELOPMENT DELIVERY 21st CENTURY CURES

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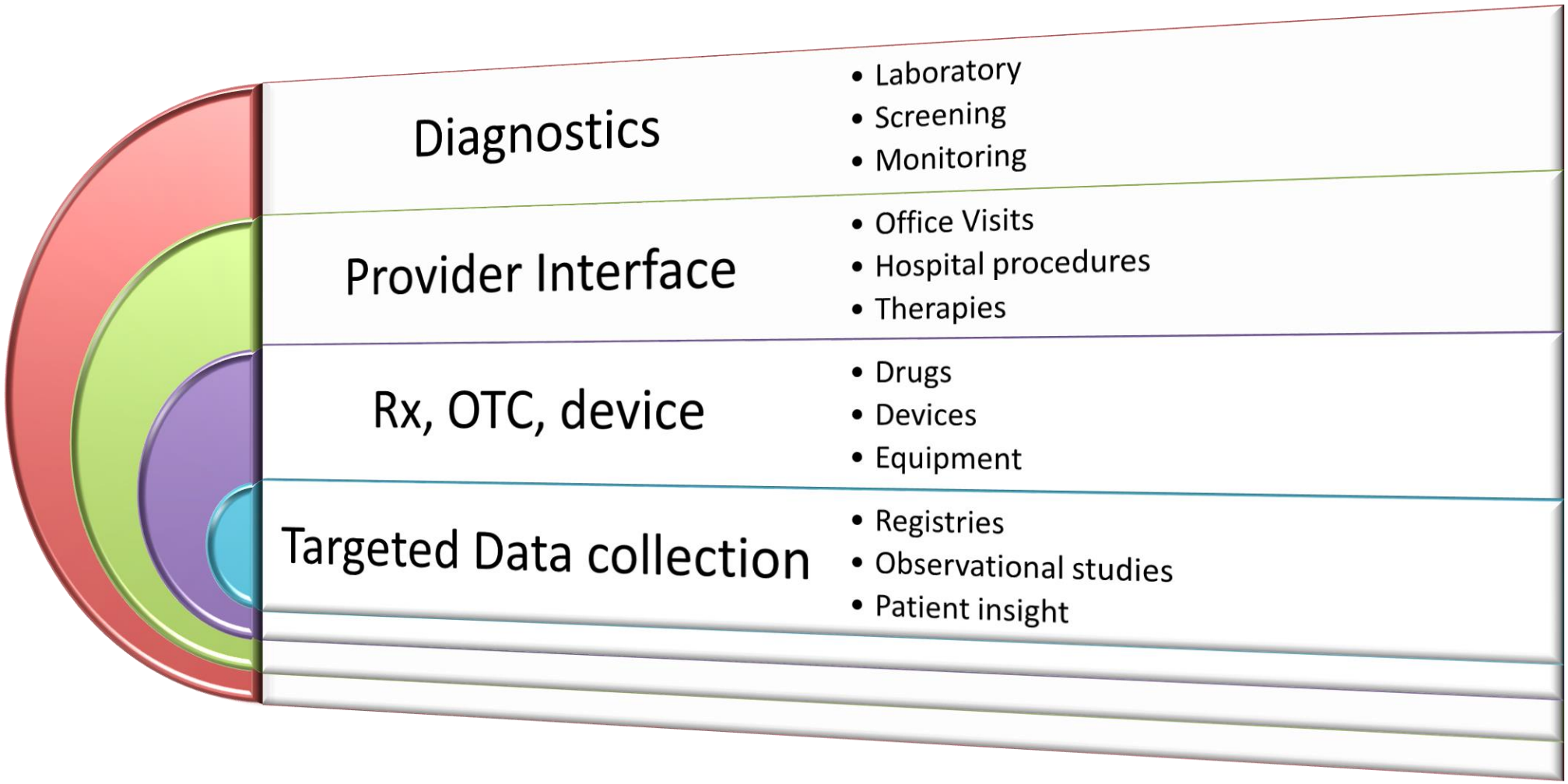
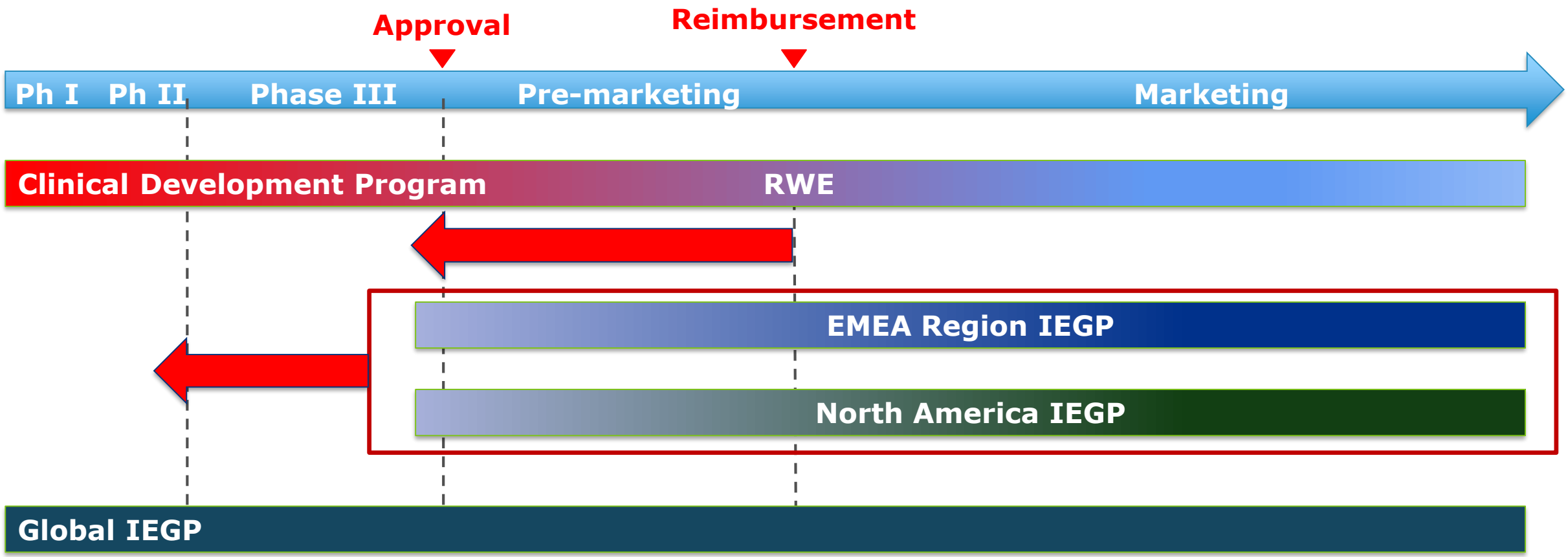
SENSORS, MONITORS, TRACKERS… NEXT?

RWE – IT'S EVERYWHERE



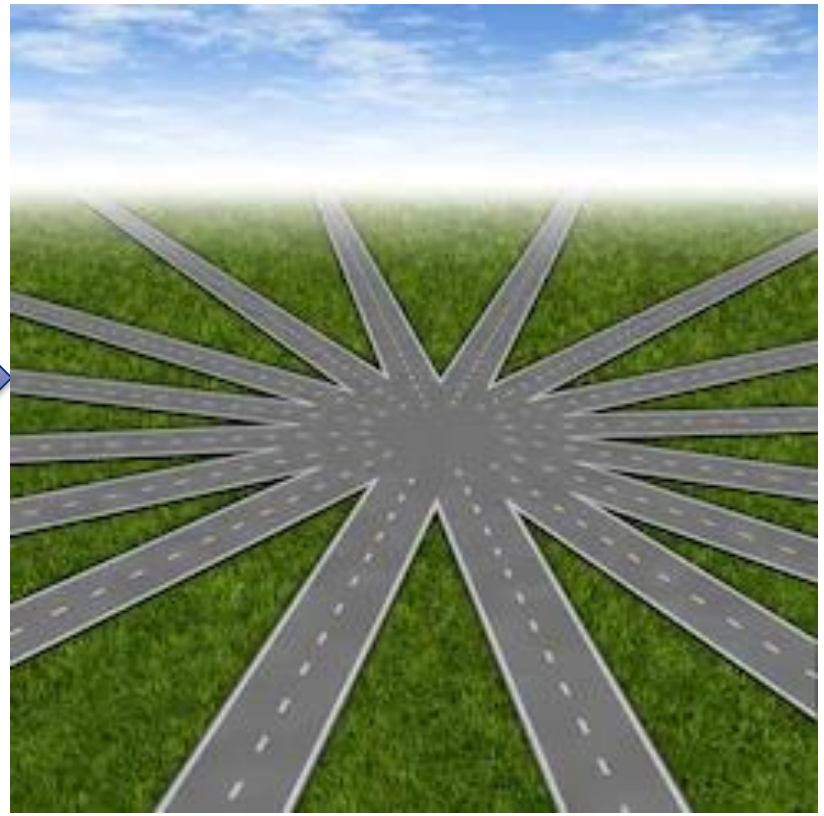
JOHNSON & JOHNSON DRIVING THE PROGRESS

Janssen - Integrated Evidence Generation Process (IEGP)



Process Evolution - Regulatory Strategy

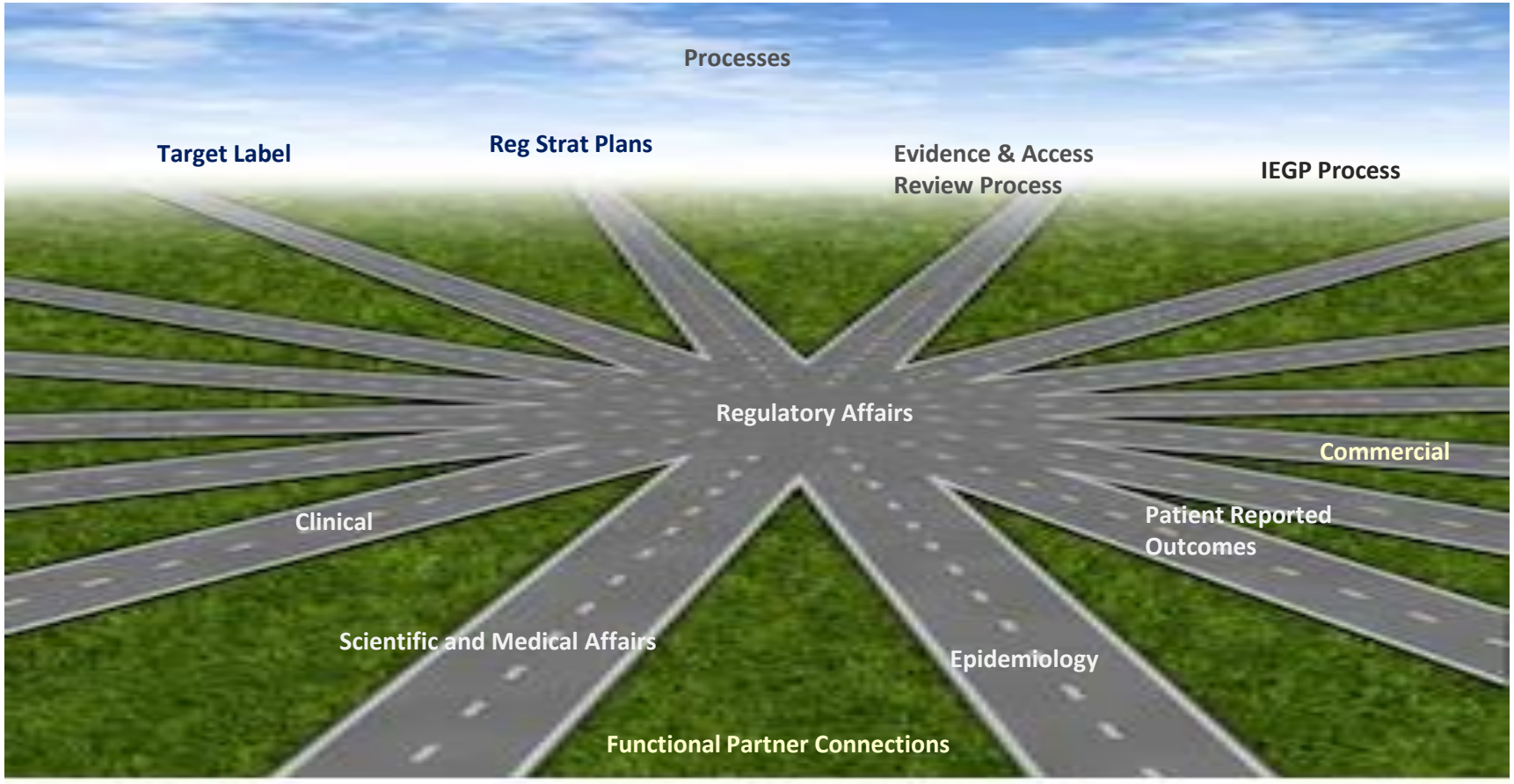
Broader Scope



Original objective was straightforward…

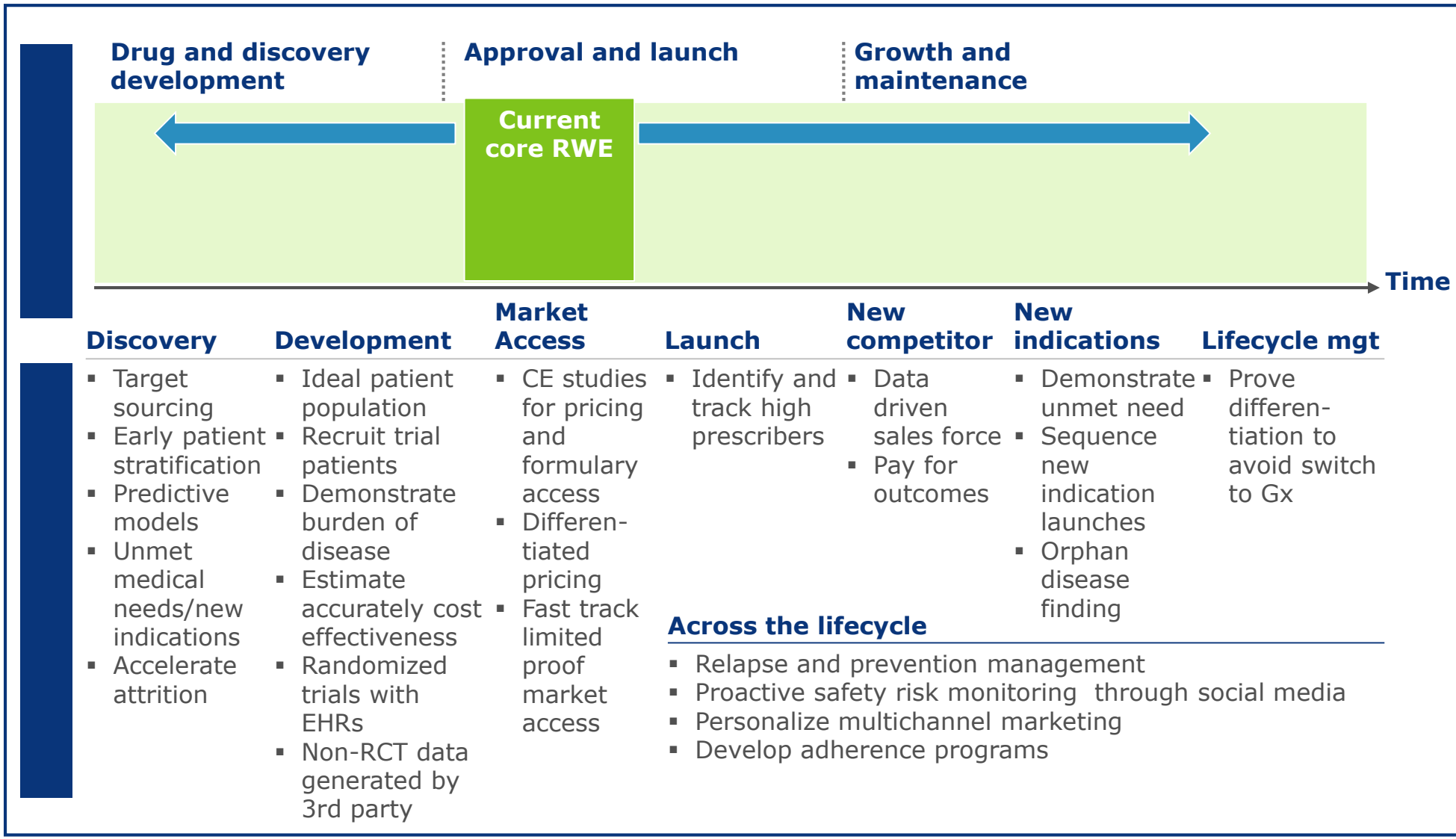
Important connections across functions and processes

Process Evolution - Regulatory Strategy

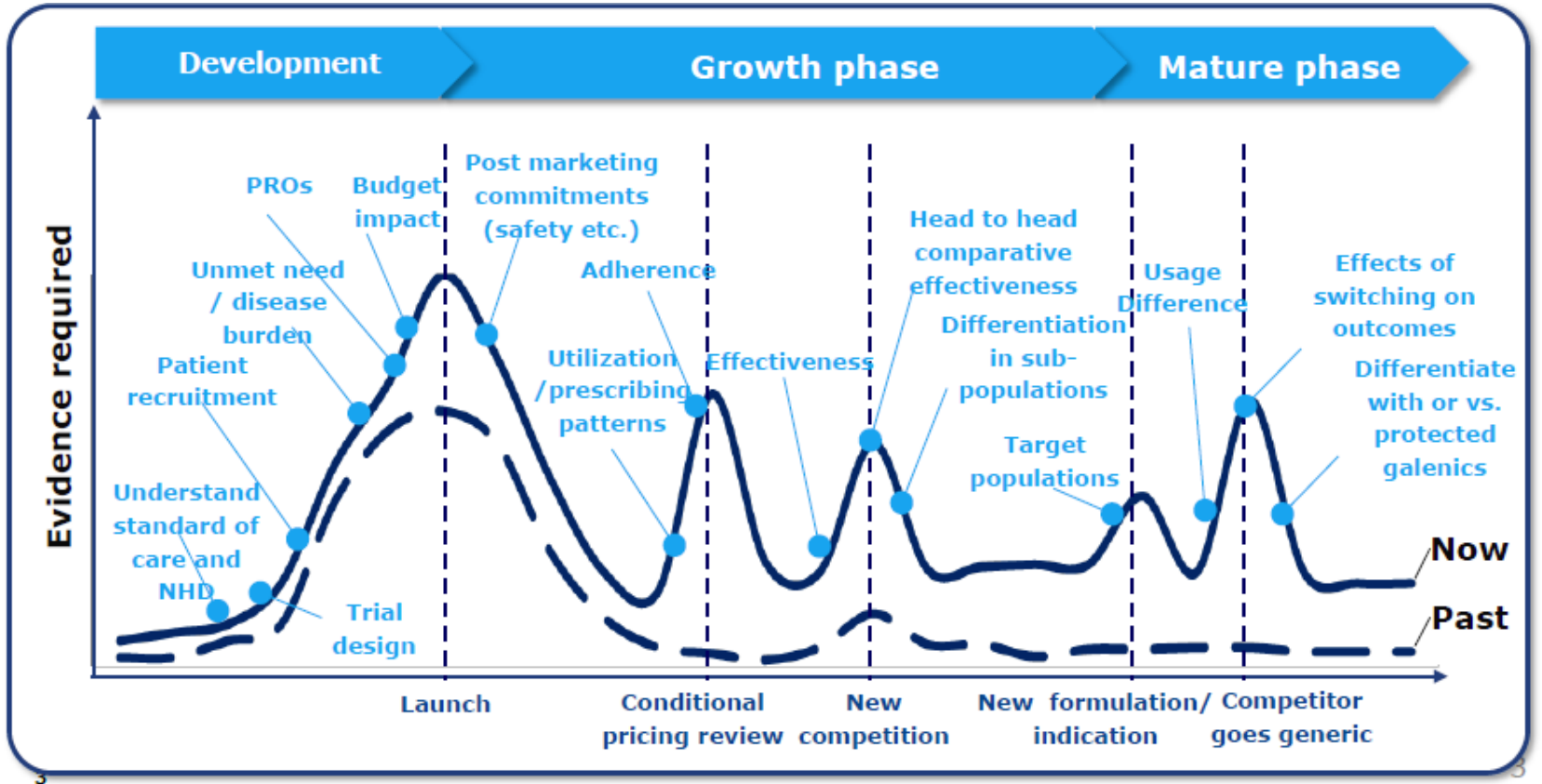


Regulatory Value of RWE

We See A Full Set of Opportunities Across The Product Lifecycle

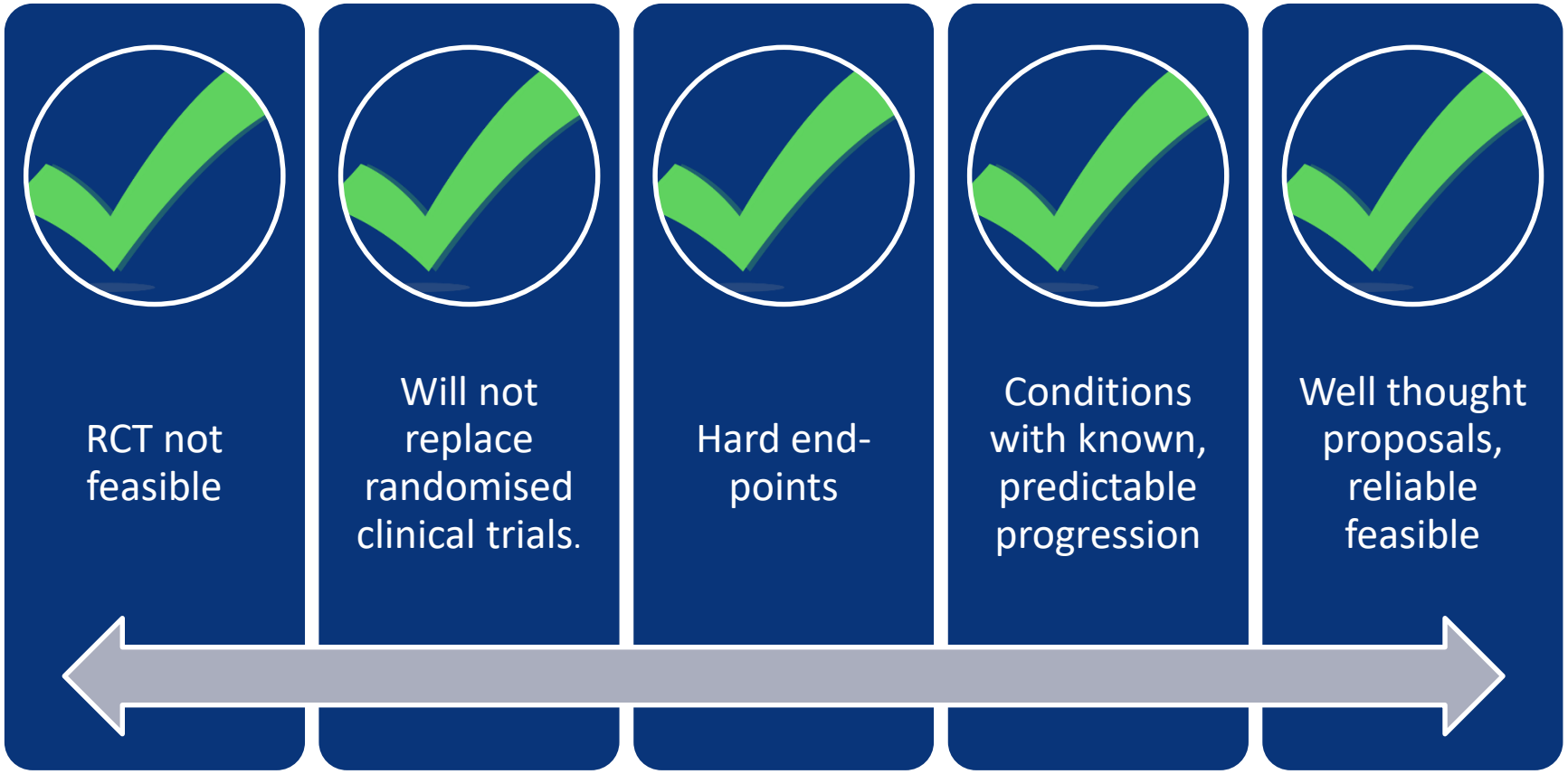


EU regulatory bodies envisage RWE supporting regulatory decisions throughout product life



Source: IMI GetReal

EMA considers RWE generally more acceptable in certain scenarios[1]



1. Alison Cave and Francesca Cerreta, Use of Real World Data in Development Programmes, 25 Apr 2017
2. Guido Rasi, Identifying opportunities for 'big data' in medicines development and regulatory science, Nov 2016

EU regulatory bodies and Industry identify the same challenges and solutions

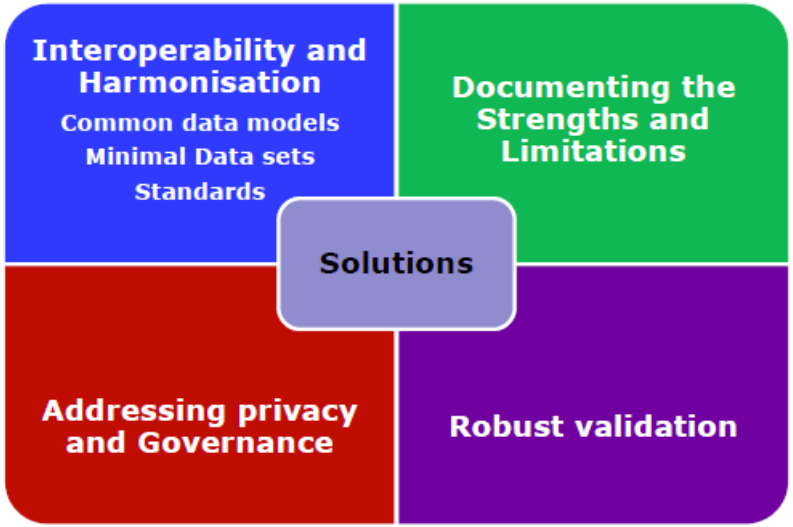
Rate of accumulation
- 100,000 RCTs
- 424 million articles in 5600 journals
- >12 TB personal health data/lifetime

Inaccessible, siloed data
- 80% of data unfindable
- Lack of interoperability
- Governance and privacy concerns

Challenges

Unstructured and heterogeneous
- 80% unstructured
- Valuable detail in unstructured text - Images, MRIs, X rays etc
- Multiple formats and provenance

Uncertain quality
- Variable standards
- Lack of validation – causality vs coincidence
- Managing bias and confounding



From Alison Cave, EMA-EuropaBio Annual Bilateral meeting, Jun 2017

Regulatory Framework – PRIME, MAPPs

Early access tools: Overview

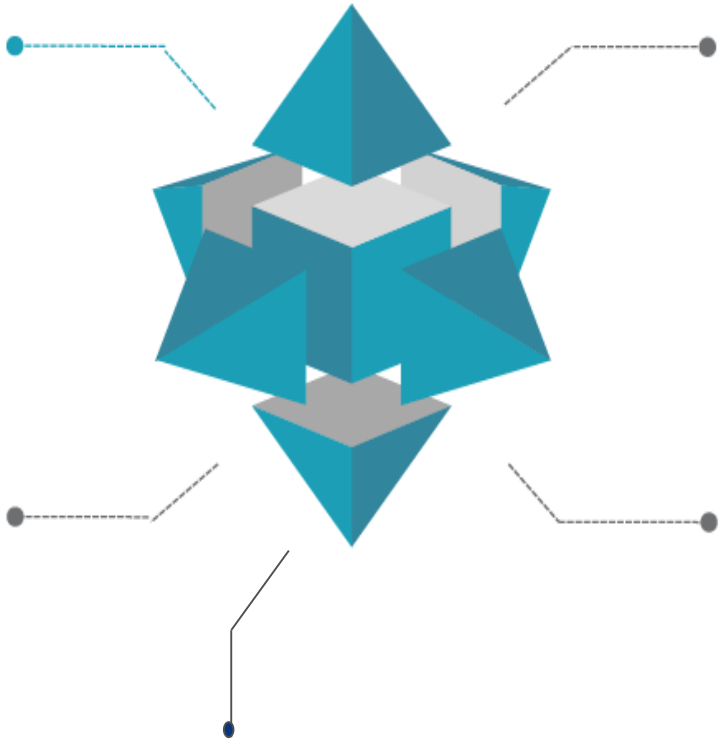
PRIME

Major public health interest, unmet medical need.

Dedicated and reinforced support.

Enable accelerated assessment.

Better use of existing regulatory & procedural tools.



Adaptive Pathways

Scientific concept of development and data generation.

Iterative development with use of real-life data.

Engagement with other healthcare-decision makers.

Accelerated Assessment

Major public health interest, unmet medical need.

Reduce assessment time to 150 days.

Conditional MA

Unmet medical need, seriously debilitating or life-threatening disease, a rare disease or use in emergency situations.

Early approval of a medicine on the basis of less complete clinical data.

Compassionate Use

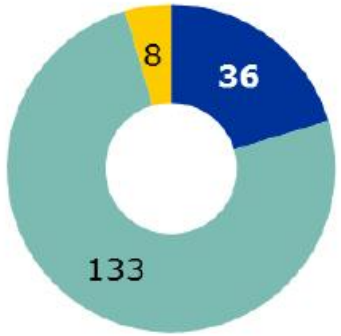
Unauthorised medicinal products

Seriously debilitating, life threatening, no satisfactory treatment

Undergoing CAP MAA or clinical trials

CHMP recommendations to MS

Two years of PRIME



■ Granted ■ Denied ■ Out of scope*

21% success rate

177 requests received

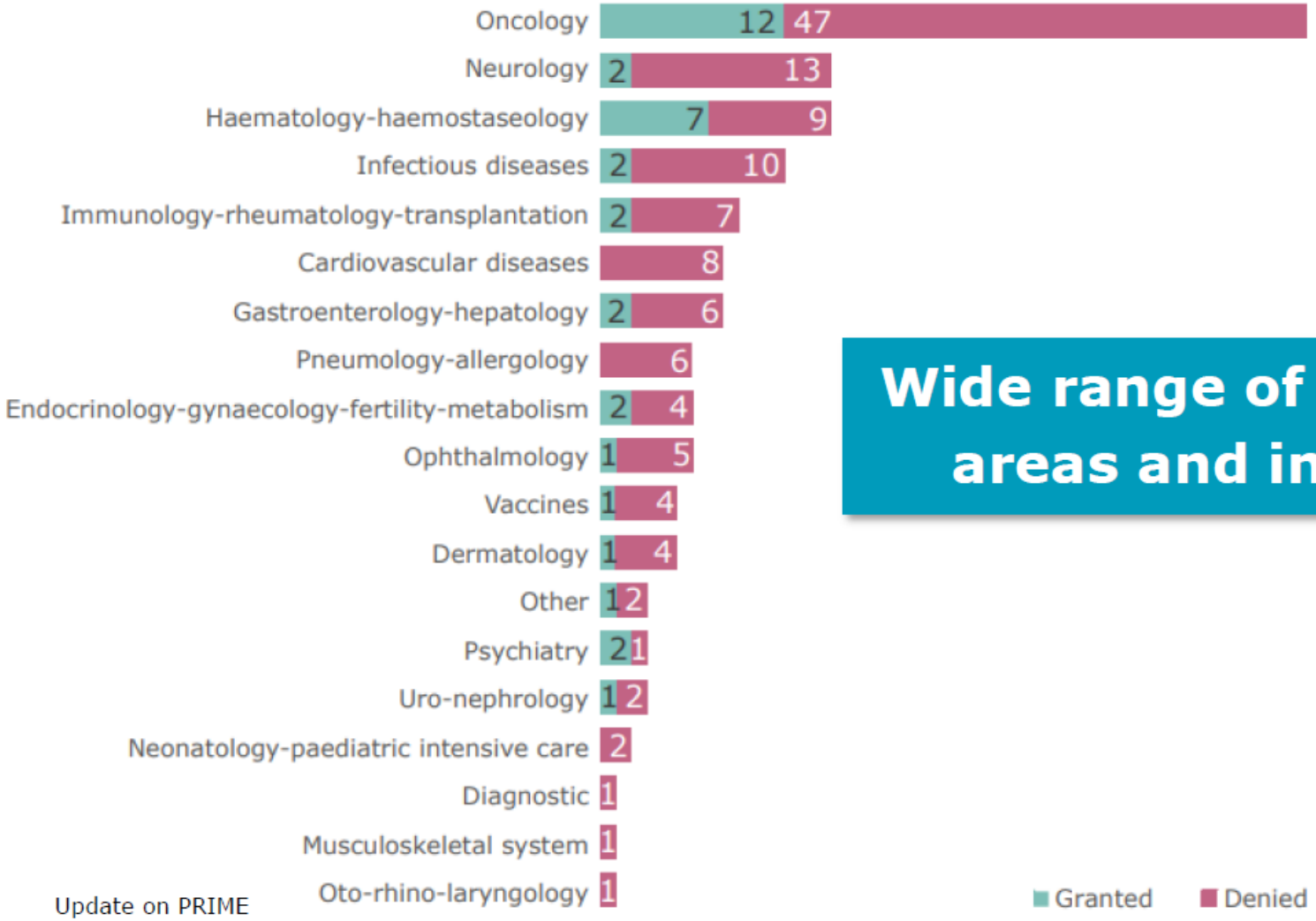
> 50% from SMEs

36 granted*

+

Publication of report and list of products on EMA website

Overview of therapeutic areas



Wide range of therapeutic areas and indications

Adaptive pathways (MAPPs)

- Aim of adaptive pathways is to improve timely access for patients
- Applies to medicines in areas of high unmet medical need with:
  - An iterative development plan (either gradual expansion of the target population or progressive reduction of uncertainty after initial authorisation)
  - Ability to engage HTA bodies and other stakeholders
  - Use of real-world data to supplement clinical trials
- Makes use of existing regulatory frameworks
- Aims to address information needs of all decision makers in a single, efficient evidence generation plan and to enable rapid action by sequential decision makers

Impact of MAPPs?

- Stimulated progress on the level of public debate

- Some building blocks accepted in principle or partly implemented
  - A focus on small patient groups with high unmet need
  - Need for iterative development and assessment across lifecycle
  - Need for multi-stakeholder collaboration across lifecycle

- Others will take longer:
  - Appropriate use of RWE
  - Frameworks to allow adaptive pricing and reimbursement
  - Ways to ensure appropriate on-market utilisation

Value Assessment and Market Access for Innovative Oncology Products

Good progress made to ensure access to innovative oncology treatments but more can be done

Access + Adoption

- Waiting for OS data to mature is no longer an option
- Need to think differently about value assessment & consider alternative approaches

Real World Evidence

- Explore role of RWE to support innovative managed entry agreements

HTA methods were developed at a time when survival outcomes from cancer therapies were poor

Phase 3 Trial of Docetaxel vs Paclitaxel for Metastatic Breast Cancer

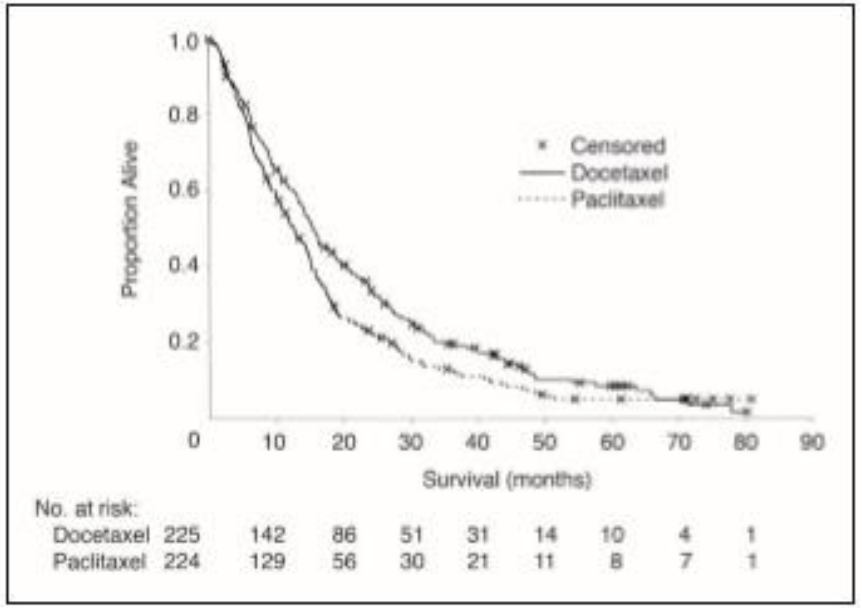


Fig 2. Kaplan-Meier plot of survival in the intent-to-treat population in each treatment group.

Phase 3 Trial of Pemetrexed vs Docetaxel vs Paclitaxel for NSCLC

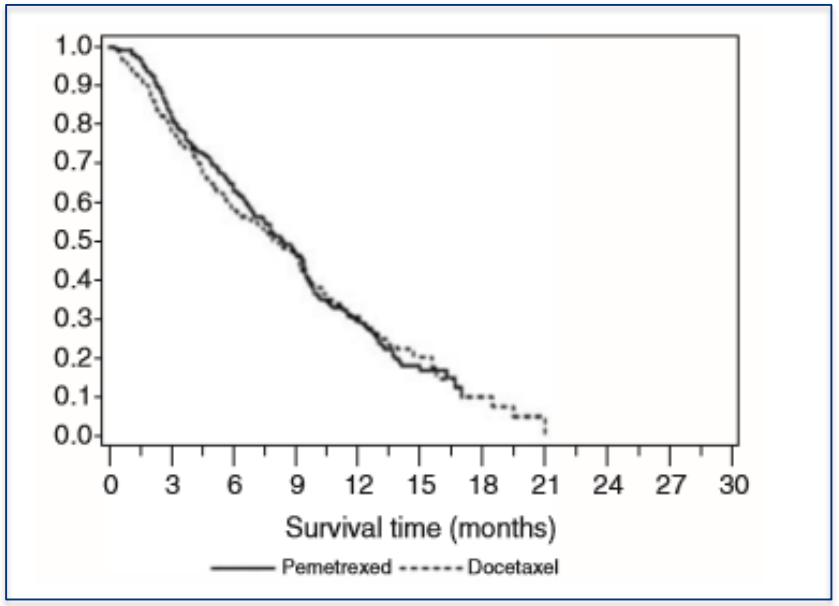
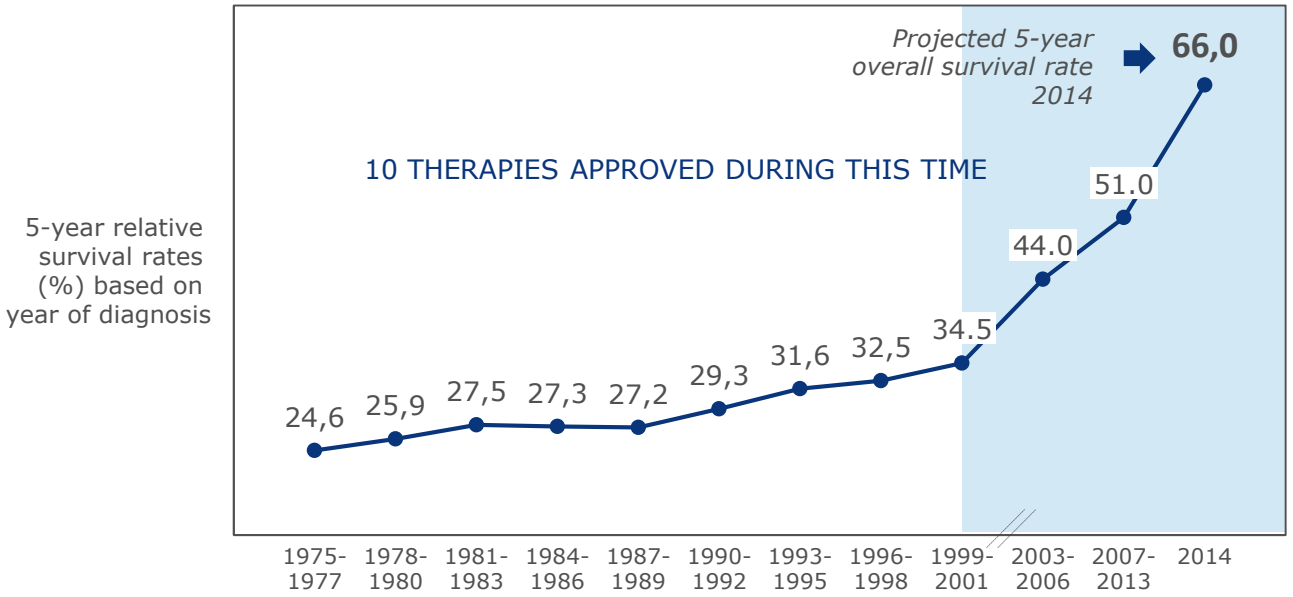


Figure 1. Kaplan-Meier estimates of survival time.

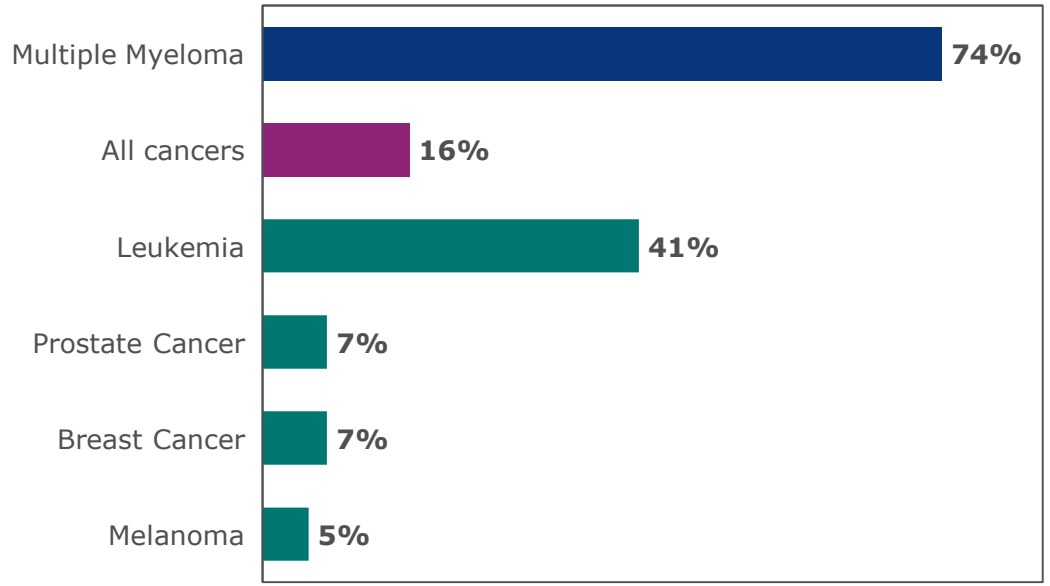
However, transformational outcomes from a new wave of innovative medicines are now within reach, with significant improvements in OS

RELATIVE SURVIVAL RATE FOR MULTIPLE MYELOMA PATIENTS SOARS BETWEEN 2001 AND 2014



Between 2001-2014, survival rates in multiple myeloma more than doubled. This was due to FDA approvals of 4 new innovative drugs

CHANGE IN 5-YEAR SURVIVAL RATES FROM 1990-2013



5 year survival rates for multiple myeloma (from 1990-2013) have increased more than four times faster than for other cancers

HTA methods are not keeping pace with advances in drug development

Collaborate to better recognize scientific understanding of disease, innovation, and safe and timely patients' access

Potential Solutions for Value Assessment

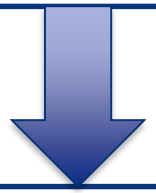
More flexibility in drug pricing is needed to handle uncertainty in the data, manage risk and recognize value

Indication-Specific Pricing

Outcomes-based Pricing

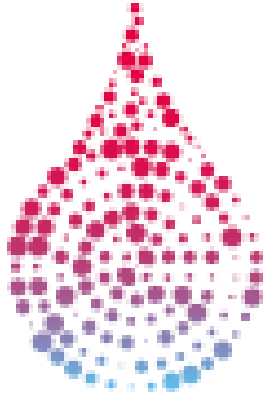
There is a need for a holistic approach to cancer care

Improving efficiency in cancer care should be a key means of securing better health outcomes for patients and making better use of available resources

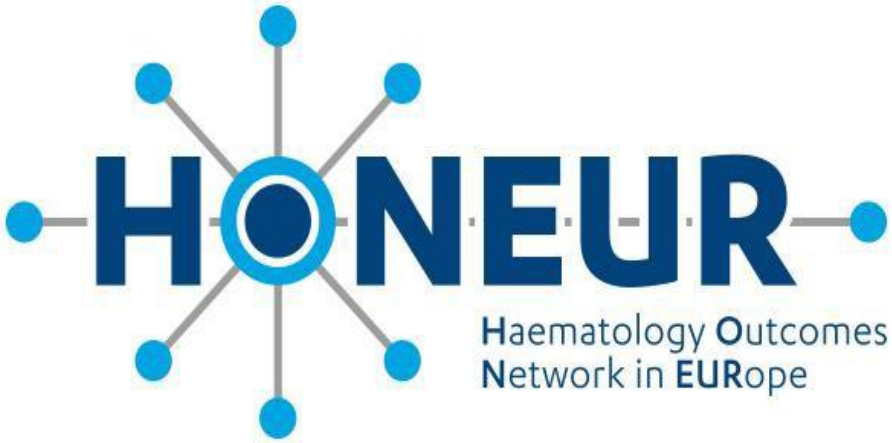


This means both eliminating what brings little or no benefit to patients and prioritizing interventions that offer the greatest benefit to patients and value to the system overall.

Multi-Stakeholder Collaboration

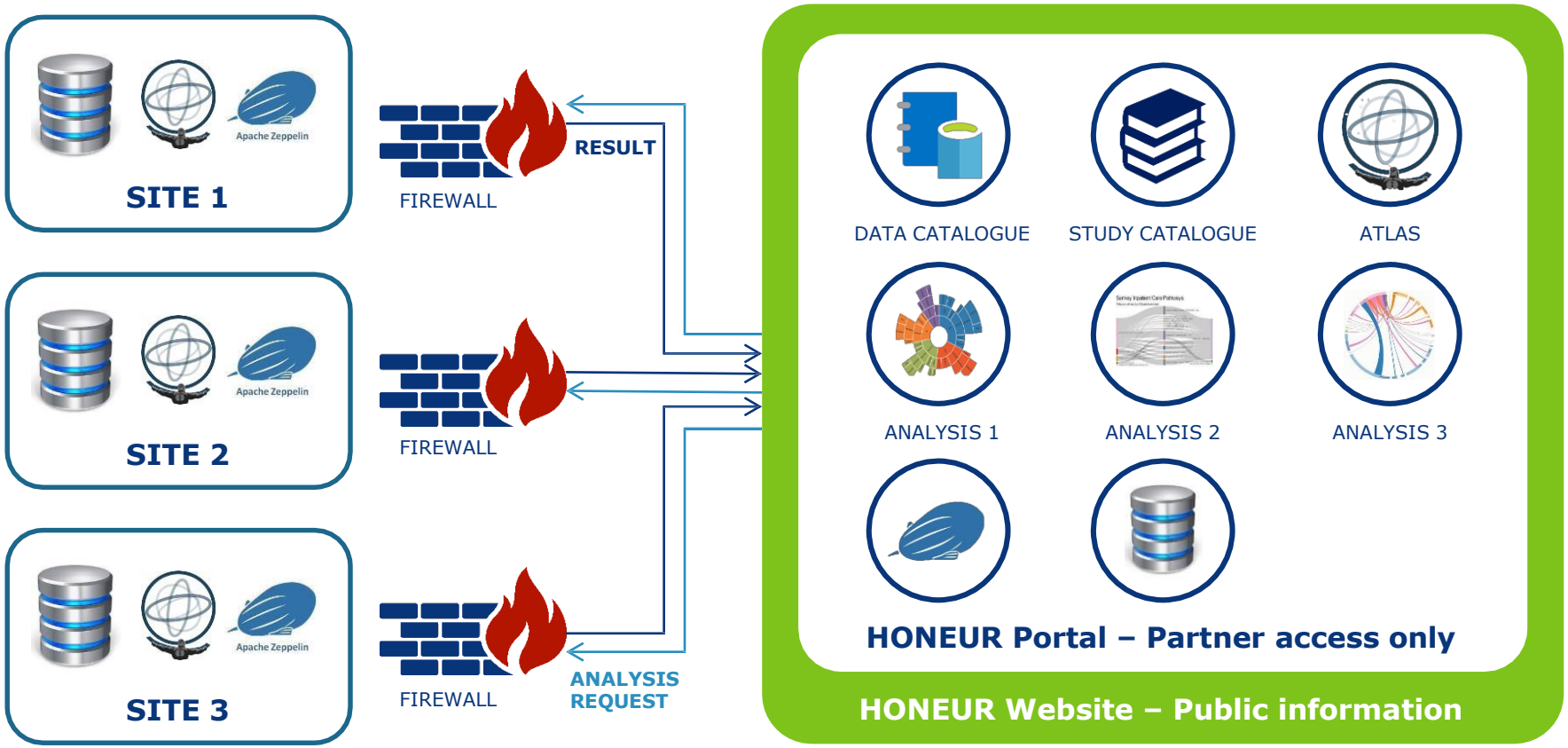


HARMONY



Date of prep: May 2018 Code: PHGB/MEDED/0518/0034

HONEUR High-level platform view



Data centre benefits

✓	Local governance at all times
✓	Facilitated analysis/benchmarking of your own data with new tools
✓	Increased academic opportunities (e.g. publications)
✓	Leverage analytics and knowledge from other organisations
✓	Expanded collaboration with other leading sites
✓	Initiate your own research questions within the collaboration network
✓	Opportunity to collaborate with Janssen executing funded research

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Integrated Evidence Generation

Real World Evidence

Regulatory Framework

Value Assessment and Market Access

Stakeholder Collaboration

Thank You