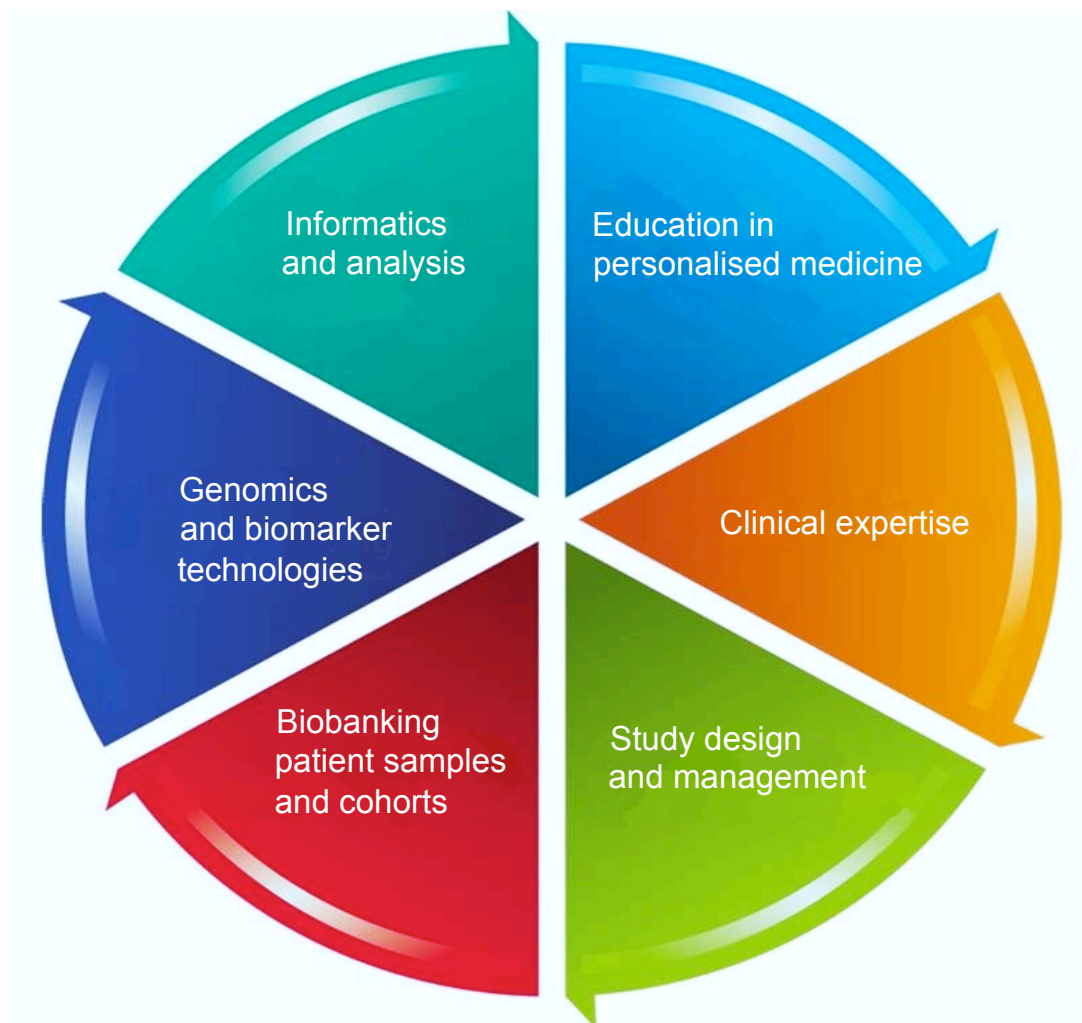


# LGI / AKESOgen At A Glance



## Strategy development

- How and when to apply stratification tools and a personalised medicine approach

## Strategic implementation

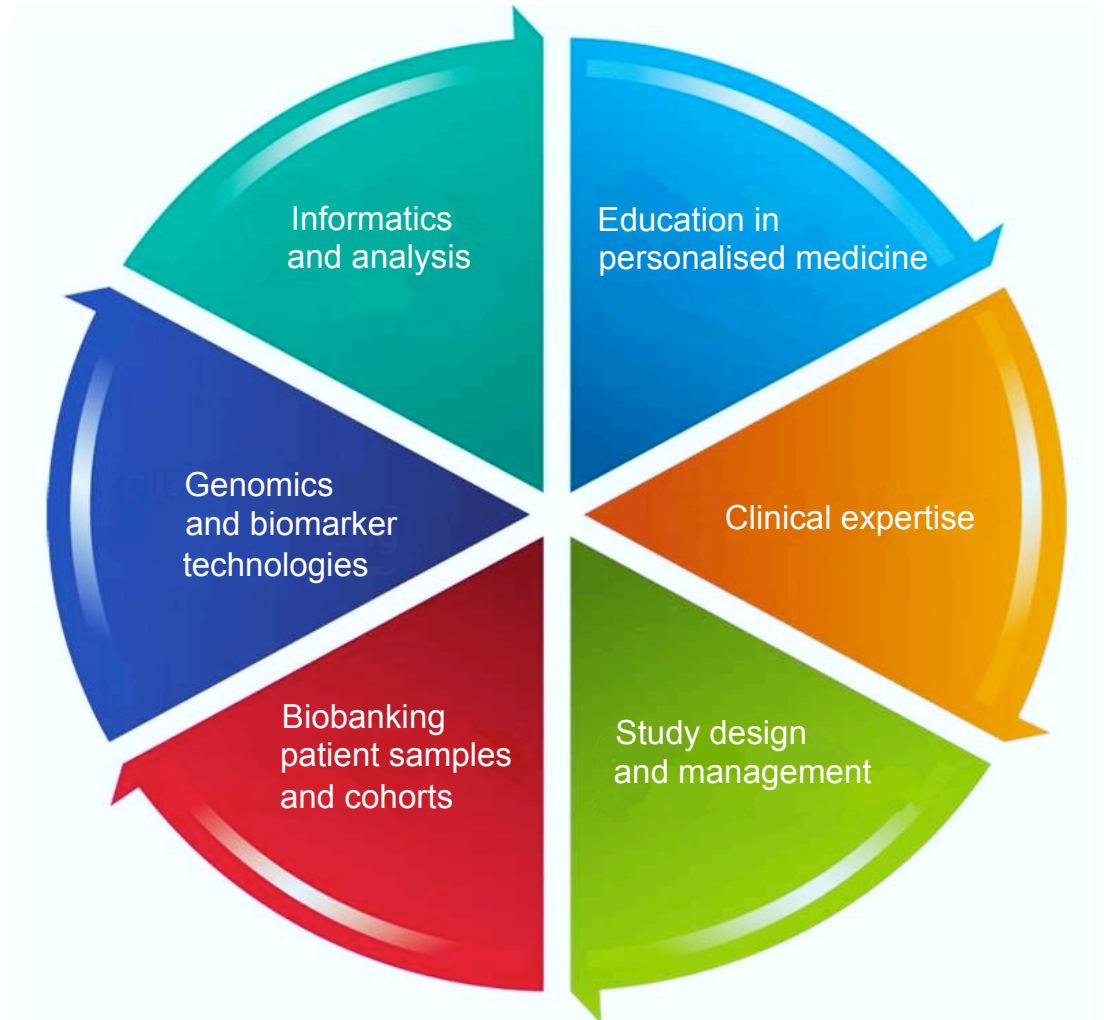
- Open innovation network between academia and pharma
- Biomarker identification
- Sample & patient resources
- New assay development

## Education

- Internal workshops & seminars

# LGI/AKESOgen At A Glance

- Extensive academic and clinical networks
- Not restricted by institutional boundaries
- Full tool-box of pharmacogenetics/biomarker expertise
- World-class expertise in a range of disciplines
- Emerging research and technologies
- Works to CLIA standards



# Key People

Robert Boisjoli  
CEO, AKESOgen



Mark Bouzyk  
CSO, AKESOgen



Roland Kozlowski  
President, LSBC



Elizabeth Foot  
VP Personalised Medicine & Nutrition  
LGI



Mark Caulfield  
Clinical Director, LGI



# EXPERTISE

<b>Dr Roland Kozlowski, PhD</b> President, LSBC	Bioentrepreneur, worked in biotech ~ 20yrs Held various operational roles, most recently CEO & founder, Lectus Therapeutics Ltd (investor exit via asset sale to UCB, Q42011) Currently, NED at Lectus Therapeutics Ltd, Chief Strategy Officer, BTM Mazowsze Sp. z.o.o., Warsaw
<b>Dr Elizabeth Foot, PhD</b> VP Personalised Medicine & Nutrition London Genetics International	Extensive experience in pharmacogenetics and clinical development 16 year within large pharma (GSK) leading pharmacogenetic strategy and projects UK Stratified Medicine & Research Network RSM Food and Health Council
<b>Prof Mark Caulfield, MD</b> Director of William Harvey Research Institute & NIHR Cardiovascular Biomedical Research Unit, Barts and The London Medical School	World expert in genetics of hypertension Major clinical trials programme and a partnership with Quintiles Trans-national President, British Hypertension Society

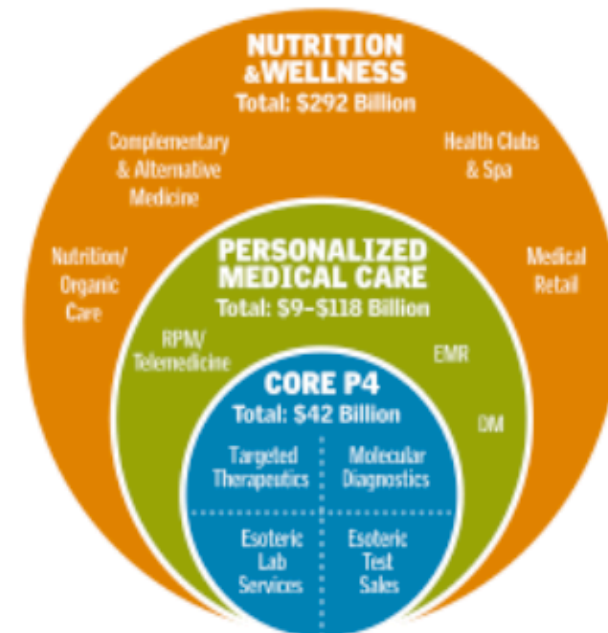
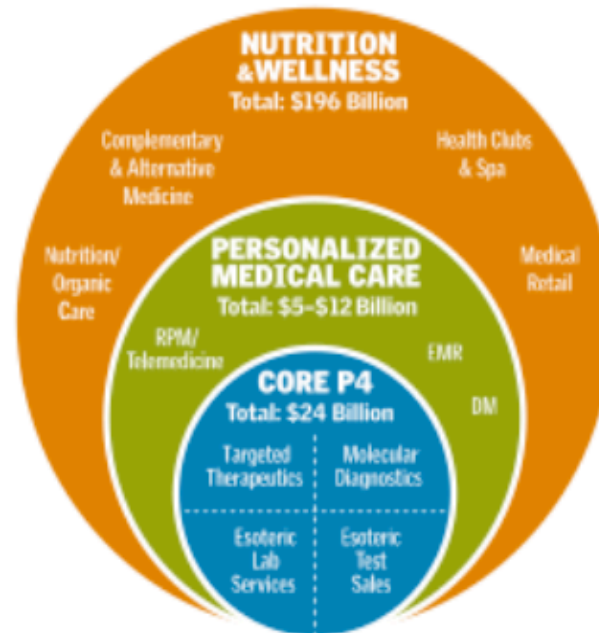
# The Future – Niche not Blockbusters

Personalized Medicine  
Market Size,  
2009 and 2015

**2009 TOTAL MARKET:  
\$225–\$232 Billion**

**2015 TOTAL MARKET:  
\$344–\$452 Billion**

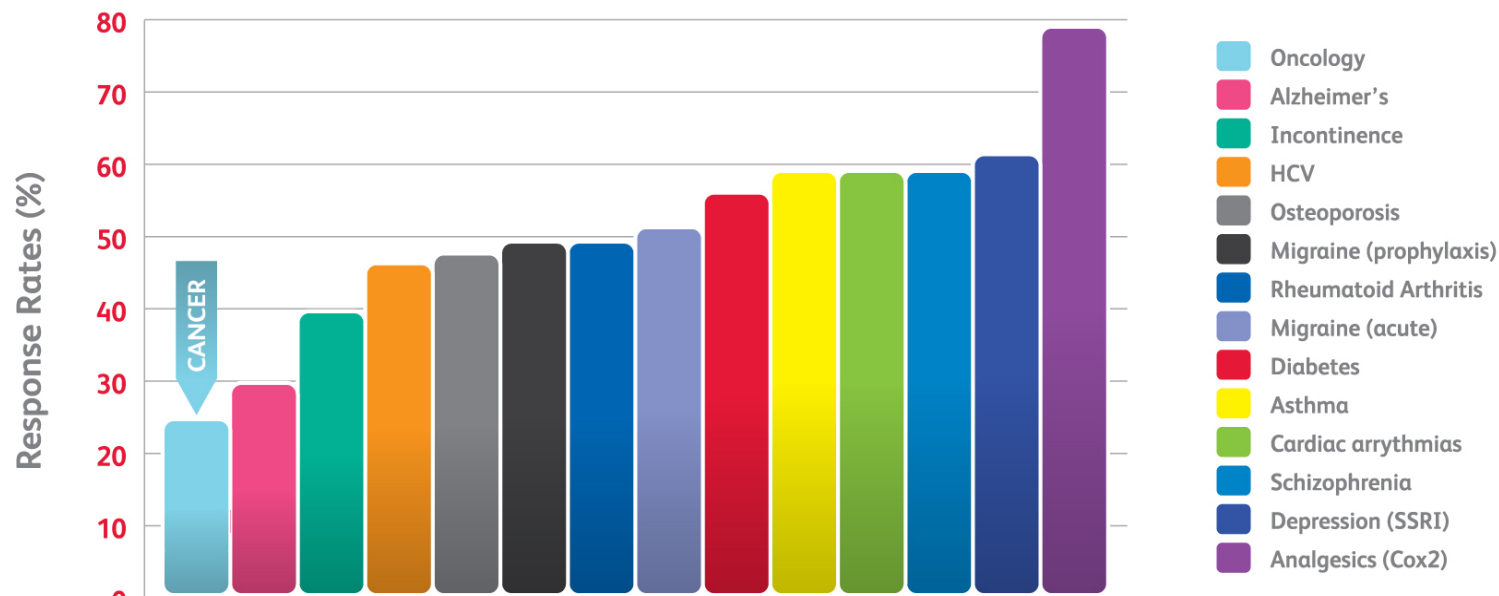
[+]  
Roll over each category  
to reveal dollar costs.



Totals may differ due to rounding.  
Source: PricewaterhouseCoopers analysis.

# The Challenge and the Opportunity ..*Variability*

- People do not respond to medicines the same way
  - Adverse events, dose, efficacy
  - Often difficult to predict
- By 2020 most medicines paid for on the basis of results<sup>1</sup>



Source: Spear et al, Trends Molecular  
Medicine 2002;7;201-4



# Personalised Medicine As The Goal – Not The Rescue

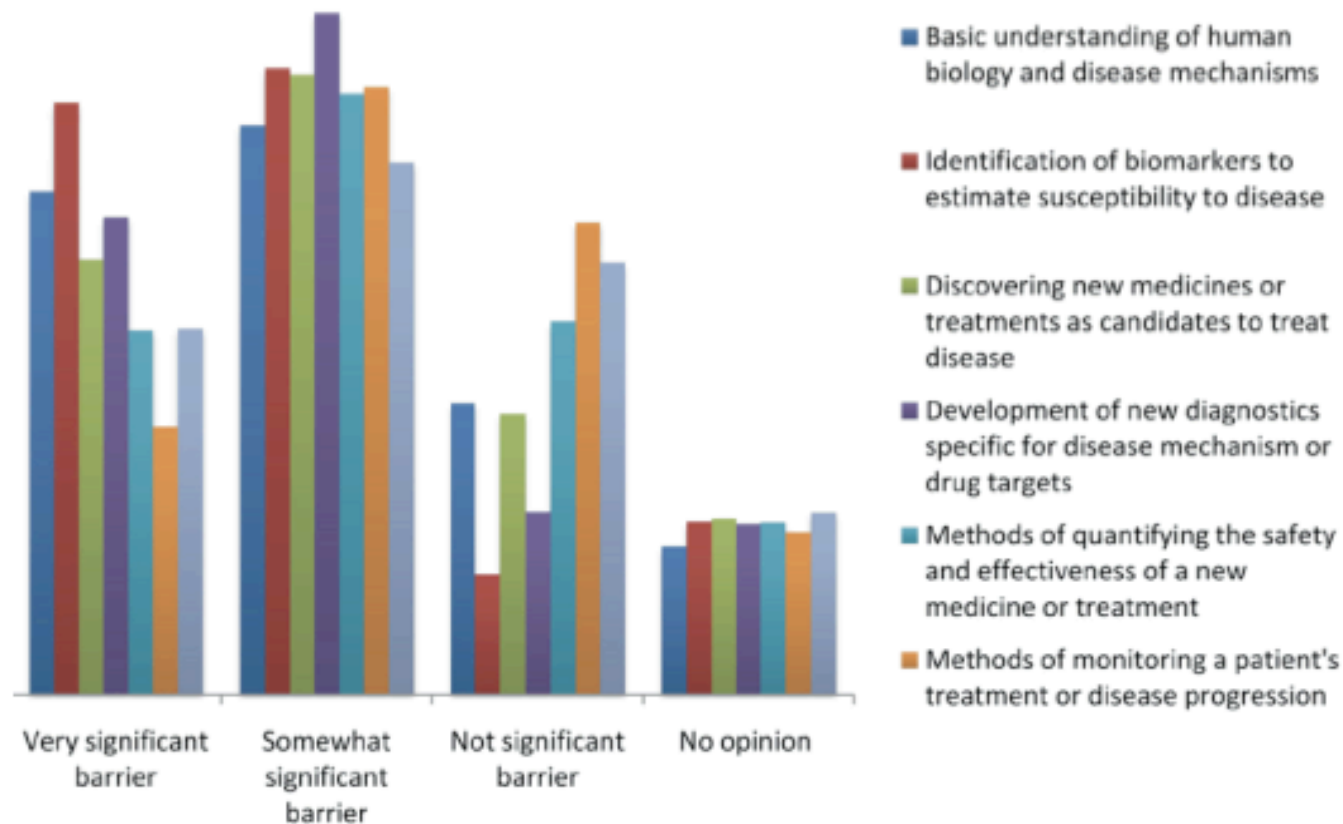


- 35 "innovative" drugs approved by FDA 2011
- 2 breakthroughs in personalized medicine - one for melanoma and one for lung cancer. Approved with a diagnostic test
- 77 provide major advances in cancer treatment
- Almost half judged significant therapeutic advances over existing therapies for heart attack, stroke and kidney transplant rejection
- 10 for rare or "orphan" diseases

<http://www.fda.gov/AboutFDA/ReportsManualsForms/Reports/ucm276385.htm>

# Key Scientific Barrier – identifying the appropriate biomarkers

Distribution of perceived scientific barriers





# History: *London to International*

**2007**

## **London Genetics Ltd**

- £2.1m seed funding
- Company limited by guarantee
- London based academic members

**2011**

## **London Genetics International**

- Spun out for-profit company
- Extend international reach (Poland, Norway & USA)

**2012**

## **London Genetics International\***

Acquired by Life Science Biznes Consulting Sp. z o.o.

\*trading name for LSBC (London) Ltd

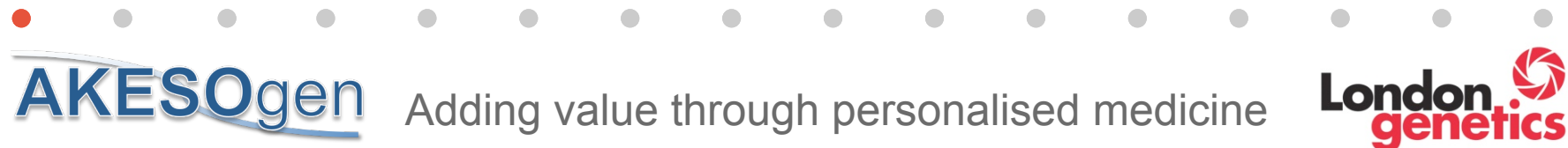
- Provides personalised medicine & nutrition arm
- Strengthens reach into Central Europe
- Strengthens commercial focus

**AKESOgen**

Adding value through personalised medicine

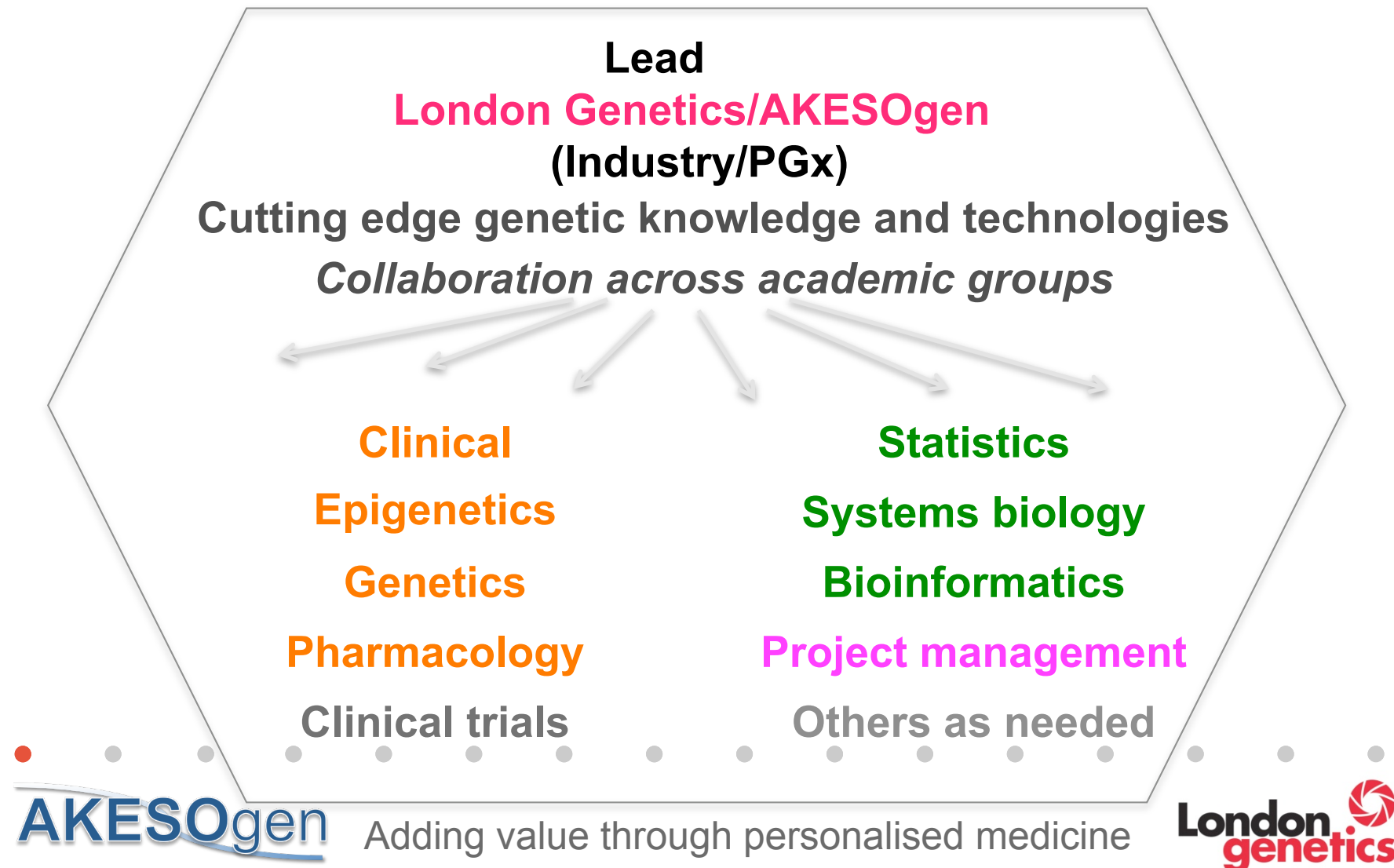
**London**  
**genetics**

- ***provide Single commercial portal for London & international***



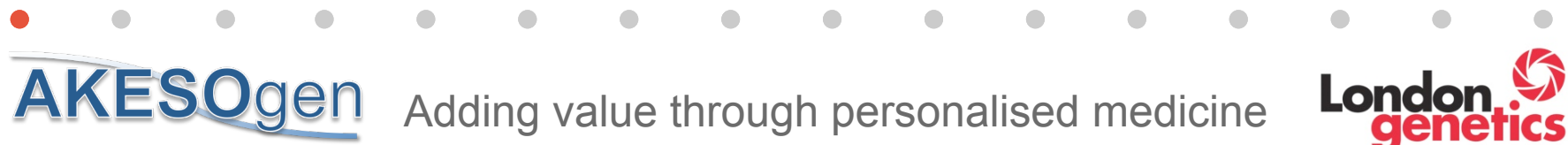
# Creating Expert Working Groups

*- right resource at right time*



## Extensive Clinical and Genomic / Biomarker resource

- **Connected to all teaching hospitals in London**
  - Including Academic Health Science Centres
- **Established infrastructure for clinical trial recruitment**
  - Including many topic-specific clinical networks
- **Linked to primary care networks**
  - Including multi-ethnic populations
- **Genetics, epi-genetics, metabolomics, proteomics**



# Analytical Skills

- **LGI has unparalleled access to expert knowledge:**
  - Statistical analysis and study design
  - Interpretation & application of complex, high dimensional data
  - Disease stratification for personalised healthcare
  - Biomarker and companion diagnostic development
- **LGI Staff and Associates are Industry experts:**
  - Skilled in the presentation and visualization of complex concepts and data to diverse audiences
  - Mostly from an Industrial research background
  - In-depth understanding of the needs of Pharma and Biotech

# Work Across the Development Pipeline

