



# Open Targets in the Open Science Monitor

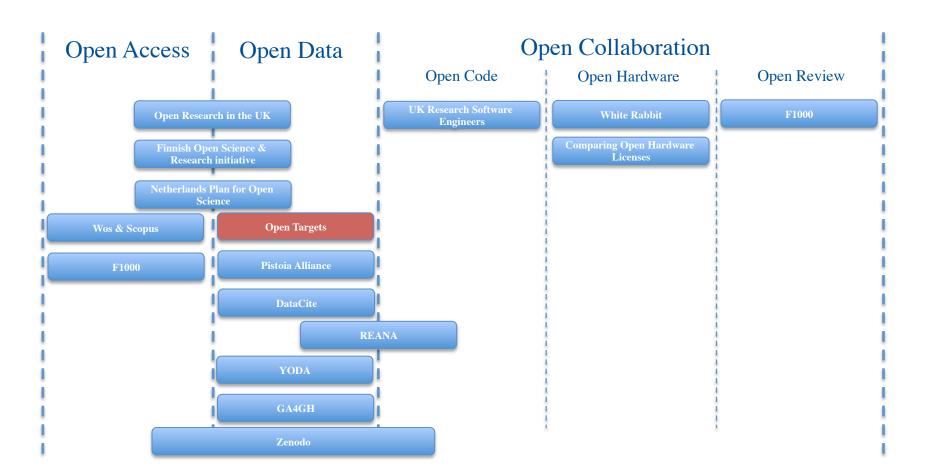
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Open Science Monitor Webinar, 5th July 2019

## Overview of case studies

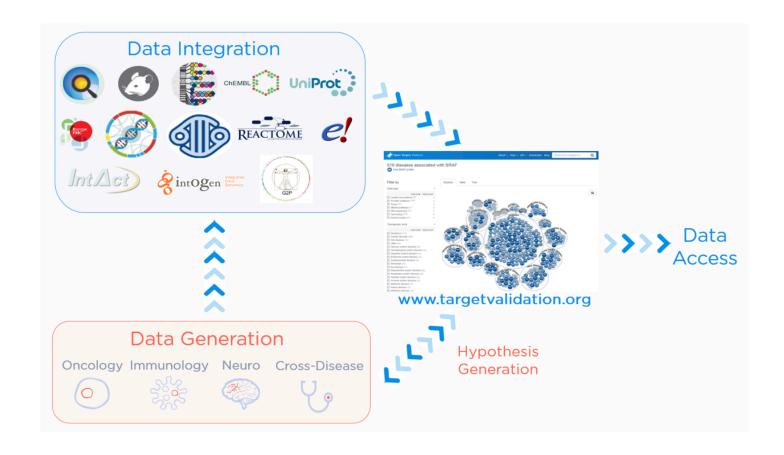
Ε

The OSM delivers 30 case studies on the drivers and barriers encountered regarding open science and the direct impact on three main areas: science, industry and society.



# Why Open Targets as a case for OSM

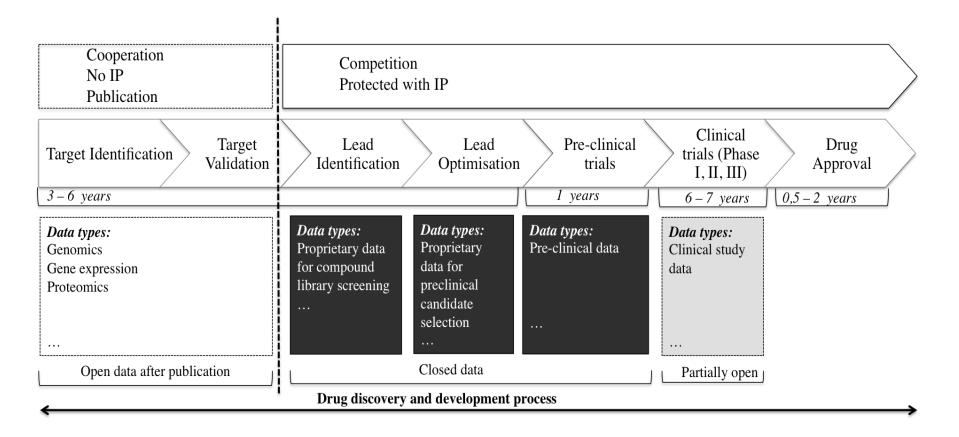




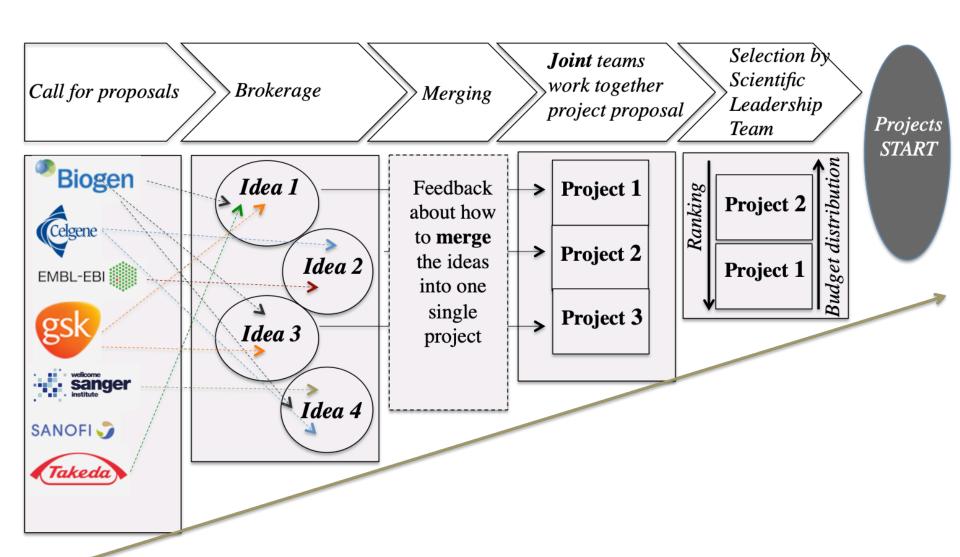
Source: Open Targets, 2018

What is shared?









# **How- Modularity**

Ε

Data aggregation

Data integration Data generation

## Public Data types

- Genetic associations
- Somatic mutations
- Drugs (from CHEMBL about known drugs FDA)
- Pathways & systems biology
- RNA expression
- Text mining (associations from text-mining literature databases)
- Animal models

### **Knowledge Domain**

- About target-disease associations
- Drug discovery phase 1 and 11

## OT PARTNERS ·

## Data types

Data from high throughput experimental projects performed by OT partners together that generate target-centred data in human, physiologically relevant systems to strengthen causal links between targets and diseases in selected therapeutic areas

#### **Knowledge Domain**

- About target-disease associations
- Drug discovery phase

# Private to SINGLE firm

#### Data types

Proprietary data for compound library screening and preclinical candidate selection

#### **Knowledge Domain**

- About lead identification
- Drug discovery phase III and onwards

## Take aways

- Smart openness to accelerate innovation: The inherent tension between the goals of scientific openness and commercial exploitation does not necessarily imply incompatibility, but a need to identify sophisticated **solutions** that adequately balance the divergent interests at different phases of scientific processes.
- Defining a common ground: Companies are reluctant to share knowledge and data when we move towards the heart of what makes those companies truly competitively, but they can accommodate such openness if we are in a pre-competitive research phase and there is an agreement on a collaborative framework that defines boundary conditions.
- Data publication is only the beginning: Sharing scientific data is a necessary but insufficient requirement for data re-use. User-driven platform design, complementary support, and close interaction with data generators.





# Thanks for your attention!

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