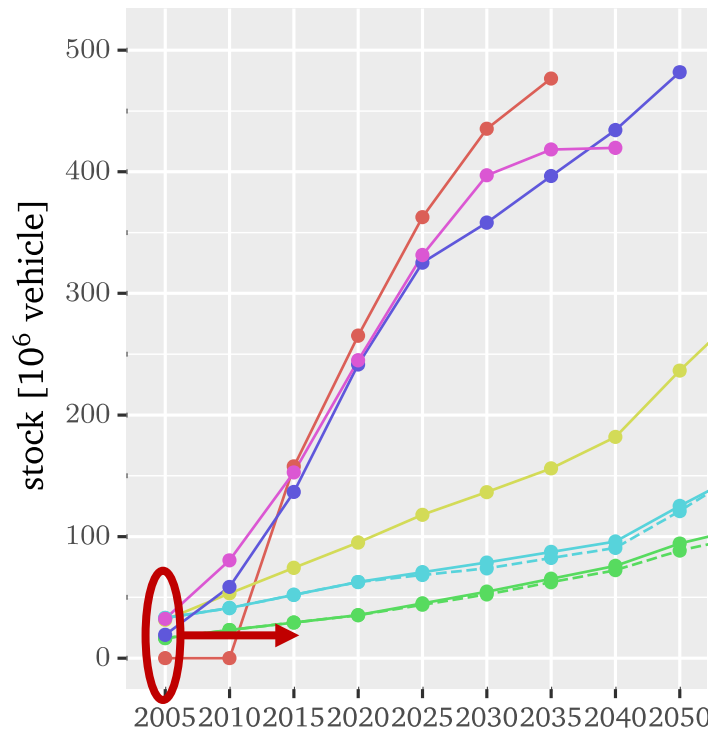


KAPSARC Model Data Editor – Datahub Demonstration

Amar Amarnath Head of Energy information Management
amar.amarnath@kapsarc.org

Objectives of iTEM-KAPSARC

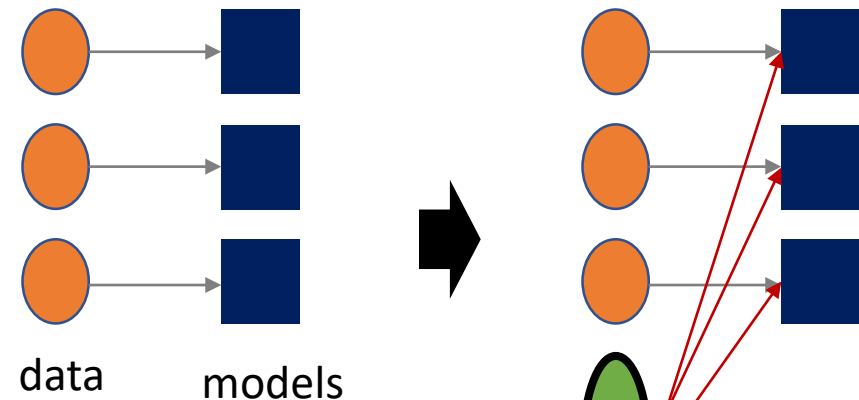
- Bringing the calibration year forward.
- Shortening the calibration lifecycle



ITEM-KAPSARC

ITEM

- Model-ready common database used by many models
- One model can choose from multiple datasets depending on the needs



ITEM

ITEM-KAPSARC

KAPSARC Data Challenges & Models

Data availability and change alerts

- Currency (time from published date to database)
- Completeness (breadth, temporal and granularity)
- Consistency
- Correctness

Data trust improves when data is

- Traceable back to source
- Used, reviewed, commented and critiqued
- Relevant to researcher context
- Accessible across systems (APIs)
- Definitions are standard, meta data published
- Data is current

Security

- Public, Restricted. Confidential

KAPSARC Energy Model – KSA

KAPSARC Energy model – GCC

KAPSARC Energy
macroeconomic model – KSA

KAPSARC Global energy
macroeconomic model

KAPSARC Toolkit for behavioral
analysis (KTAB)

KAPSARC Marine transport
analysis framework

KAPSARC Vehicle choice model

KAPSARC Energy model - China

KAPSARC Economic screening of
CO2 enhanced oil recovery

KAPSARC Upstream model of
investment decision options

KAPSARC Price elasticity model

KAPSARC Power model - utilities
of the future

KAPSARC Stabilization fund
model - KSA

KAPSARC Vehicle fleet model

KAPSARC Building energy
efficiency model

KAPSARC India renewable
energy policy atlas

KAPSARC Solar photovoltaic
toolkit

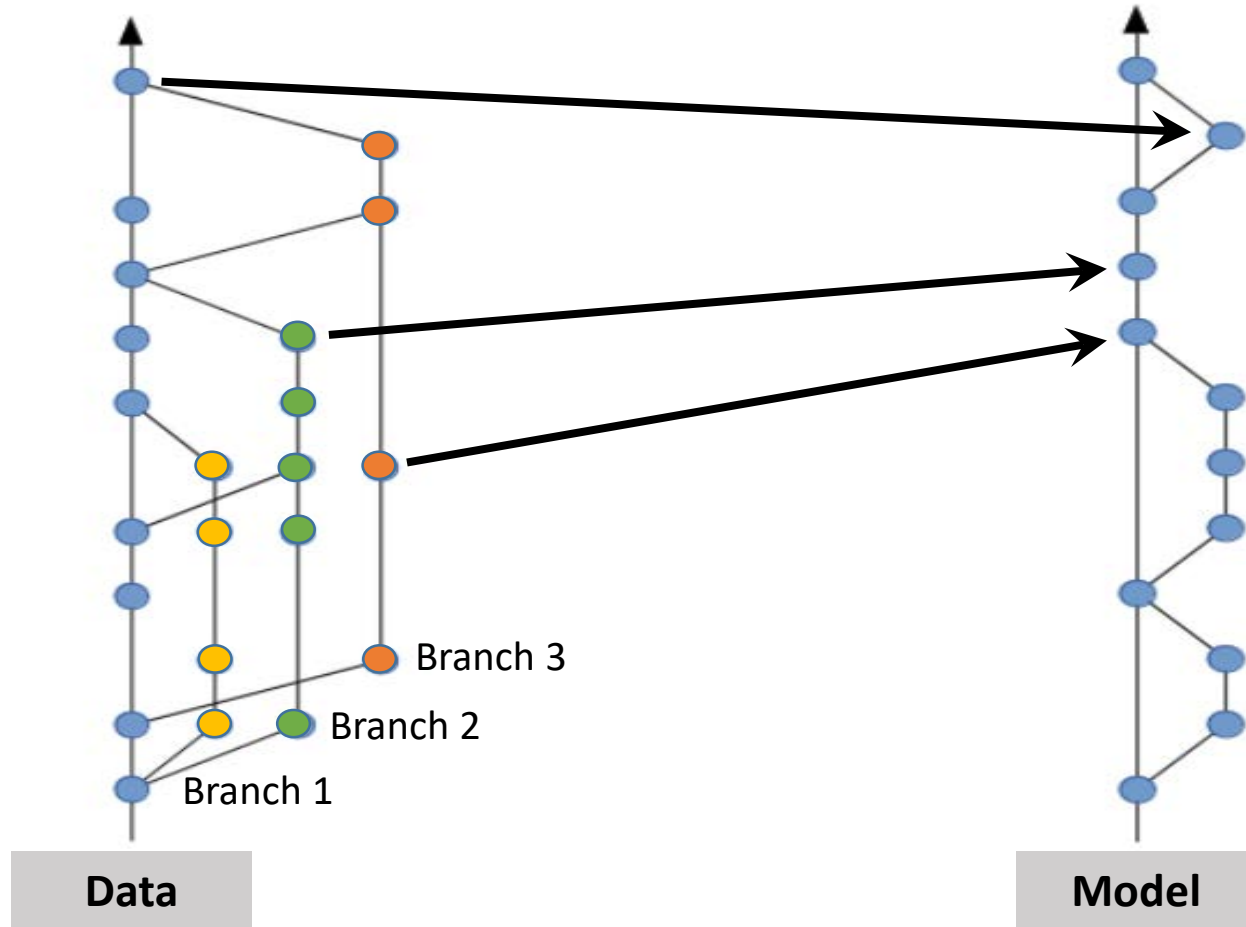
KAPSARC Energy policy database
- China

KAPSARC Nationally determined
contribution assessment db.

KAPSARC Energy resiliency
model - KSA

KAPSARC Model Data Editor (datahub)

Addressing few challenges



1. Seed data automated
2. Edit data
3. Version alert
4. Collaborate
5. API calls hist.

KAPSARC DataHub for Modelers

Open source portal to manage models' data and call via APIs

The screenshot displays the 'KAPSARC Model Data Editor alpha' interface. At the top left is the KAPSARC logo and the text 'KAPSARC Model Data Editor alpha'. At the top right, the user 'Shetty, pavithra' is logged in. The main content area is titled 'Model repositories' and features a search bar, a 'Sort by' dropdown set to 'Recently Updated', and a '+ New Repository' button. Below these are four repository cards, each with a title, navigation links (API, Source Code, Data, Application), a description, and metadata (date, branches, tables).

Repository Name	Description	Date	Branches	Tables in Master
KAPSARC Global Energy Macroeconometric Model	The objective of the KAPSARC Global Energy Macroeconometric Model (KGEM2) project is to develop a domestic policy analysis tool that captures the interactions between the Saudi and the global economie...	October 11, 2018	1 branches	0 tables in master
KAPSARC Energy Model for Saudi Arabia	The KAPSARC Energy Model for Saudi Arabia (KEM-SA) is a partial economic equilibrium model that characterizes some of the energy and most energy-intensive sectors in the Saudi economy	October 11, 2018	1 branches	0 tables in master
KAPSARC Maritime Transport Analysis Framework	General network approach to understanding transportation policy and its implications on energy consumption world-wide.	October 11, 2018	1 branches	0 tables in master
KAPSARC India Renewable Energy Policy Atlas	We have developed a web-based energy policy reference tool that systematically describes energy sector policies.	October 11, 2018	1 branches	0 tables in master

- DATASETS
- TREE
- COMMITTS

Search datasets .

[+ New Dataset](#)

/ Workshop

master




[+ New Branch](#)

 [gdp_ppp](#)
8 columns | Modified: Jan 1, 2015

New Dataset in branch *master*:

Dataset Name :

Upload MS Excel file :

 DATASETS
 TREE
 COMMITS

Search datasets .

/ Workshop

master

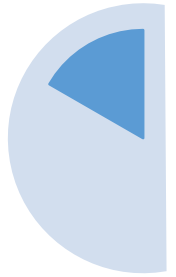
 **gdp_ppp**
 8 columns | Modified: Jan 1, 2015

Edit Dataset : gdp_ppp

indicator	country	unit	year	source	value	source_link
GDP PPP	Saudi Arabia	international \$	2008	World Bank	1163234174787.23999	https://datasource.kapsarc.org/explore/dataset/gdp-ppp-the-world-bank/information/?disjunctive.country_name
GDP PPP	Saudi Arabia	international \$	2009	World Bank	1147932152272.3667	https://datasource.kapsarc.org/explore/dataset/gdp-ppp-the-world-bank/information/?disjunctive.country_name
GDP PPP	Saudi Arabia	international \$	2010	World Bank	1220508933141.75317	https://datasource.kapsarc.org/explore/dataset/gdp-ppp-the-world-bank/information/?disjunctive.country_name
GDP PPP	Saudi Arabia	international \$	2011	World Bank	1370239542676.01074	https://datasource.kapsarc.org/explore/dataset/gdp-ppp-the-world-bank/information/?disjunctive.country_name
GDP PPP	Saudi Arabia	international \$	2012	World Bank	1470995695088.1709	https://datasource.kapsarc.org/explore/dataset/gdp-ppp-the-world-bank/information/?disjunctive.country_name
GDP PPP	Saudi Arabia	international \$	2013	World Bank	1535099554035.87012	https://datasource.kapsarc.org/explore/dataset/gdp-ppp-the-world-bank/information/?disjunctive.country_name
GDP PPP	Saudi Arabia	international \$	2014	World Bank	1619725082851.05322	https://datasource.kapsarc.org/explore/dataset/gdp-ppp-the-world-bank/information/?disjunctive.country_name
GDP PPP	Saudi Arabia	international \$	2015	World Bank	1704523727389.73779	https://datasource.kapsarc.org/explore/dataset/gdp-ppp-the-world-bank/information/?disjunctive.country_name
GDP PPP	Saudi Arabia	international \$	2016	World Bank	1755109840120.10742	https://datasource.kapsarc.org/explore/dataset/gdp-ppp-the-world-bank/information/?disjunctive.country_name
GDP PPP	Saudi Arabia	international \$	2017	World Bank	1773549391288.59668	https://datasource.kapsarc.org/explore/dataset/gdp-ppp-the-world-bank/information/?disjunctive.country_name
GDP PPP	Kuwait	international \$	2008	World Bank	238741850314.157257	https://datasource.kapsarc.org/explore/dataset/gdp-ppp-the-world-bank/information/?disjunctive.country_name
GDP PPP	Kuwait	international \$	2009	World Bank	223533024597.154724	https://datasource.kapsarc.org/explore/dataset/gdp-ppp-the-world-bank/information/?disjunctive.country_name
GDP PPP	Kuwait	international \$	2010	World Bank	220907355075.088715	https://datasource.kapsarc.org/explore/dataset/gdp-ppp-the-world-bank/information/?disjunctive.country_name
GDP PPP	Kuwait	international \$	2011	World Bank	247177337169.86615	https://datasource.kapsarc.org/explore/dataset/gdp-ppp-the-world-bank/information/?disjunctive.country_name
GDP PPP	Kuwait	international \$	2012	World Bank	268411108899.449799	https://datasource.kapsarc.org/explore/dataset/gdp-ppp-the-world-bank/information/?disjunctive.country_name
GDP PPP	Kuwait	international \$	2013	World Bank	275879924452.246948	https://datasource.kapsarc.org/explore/dataset/gdp-ppp-the-world-bank/information/?disjunctive.country_name
GDP PPP	Kuwait	international \$	2014	World Bank	282237688976.977112	https://datasource.kapsarc.org/explore/dataset/gdp-ppp-the-world-bank/information/?disjunctive.country_name
GDP PPP	Kuwait	international \$	2015	World Bank	286990241704.127075	https://datasource.kapsarc.org/explore/dataset/gdp-ppp-the-world-bank/information/?disjunctive.country_name
GDP PPP	Kuwait	international \$	2016	World Bank	300961092607.99646	https://datasource.kapsarc.org/explore/dataset/gdp-ppp-the-world-bank/information/?disjunctive.country_name
GDP PPP	Kuwait	international \$	2017	World Bank	297594270632.568481	https://datasource.kapsarc.org/explore/dataset/gdp-ppp-the-world-bank/information/?disjunctive.country_name

KAPSARC model datahub features

Open source portal to manage models' data and call using application programming interface



Q4 201 Alpha

1. Create data repos
2. Drag'n'drop datasets
3. Edit data
4. Branch and versioning
5. API ready, call history
6. GAMS.gdx integration



Q1 2019

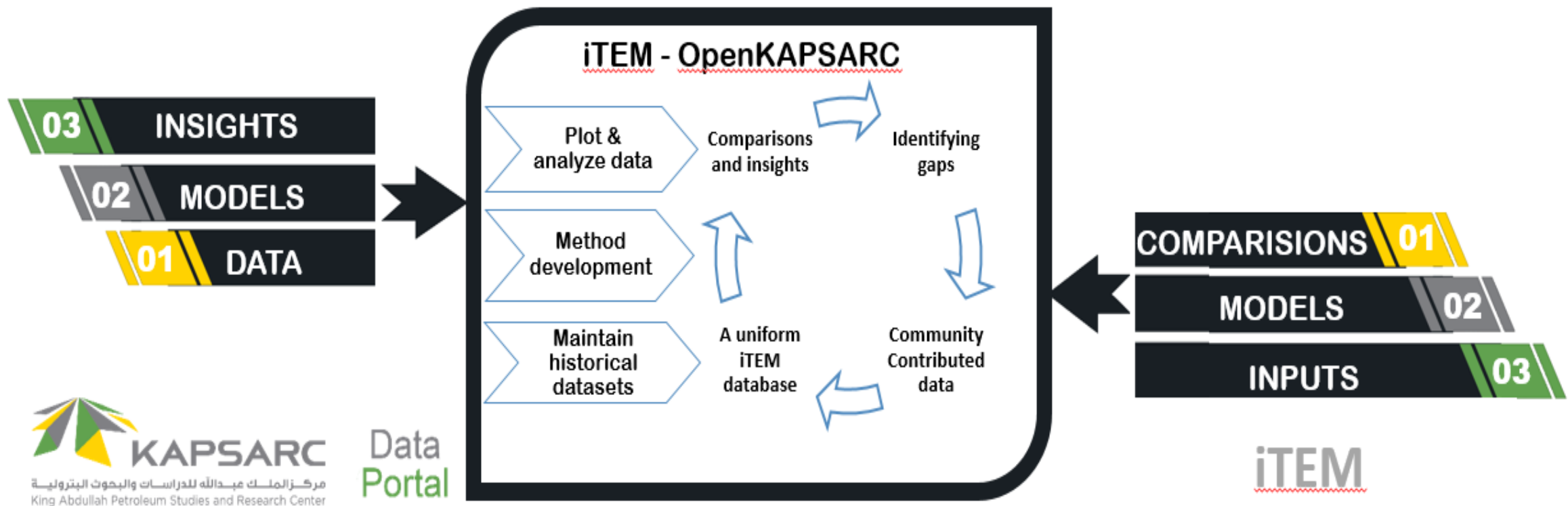
1. Data notes threads
2. Compare and alerts
3. Charts and analysis
4. Data profiler
5. Enhance GAMS integ.



Q2 2019

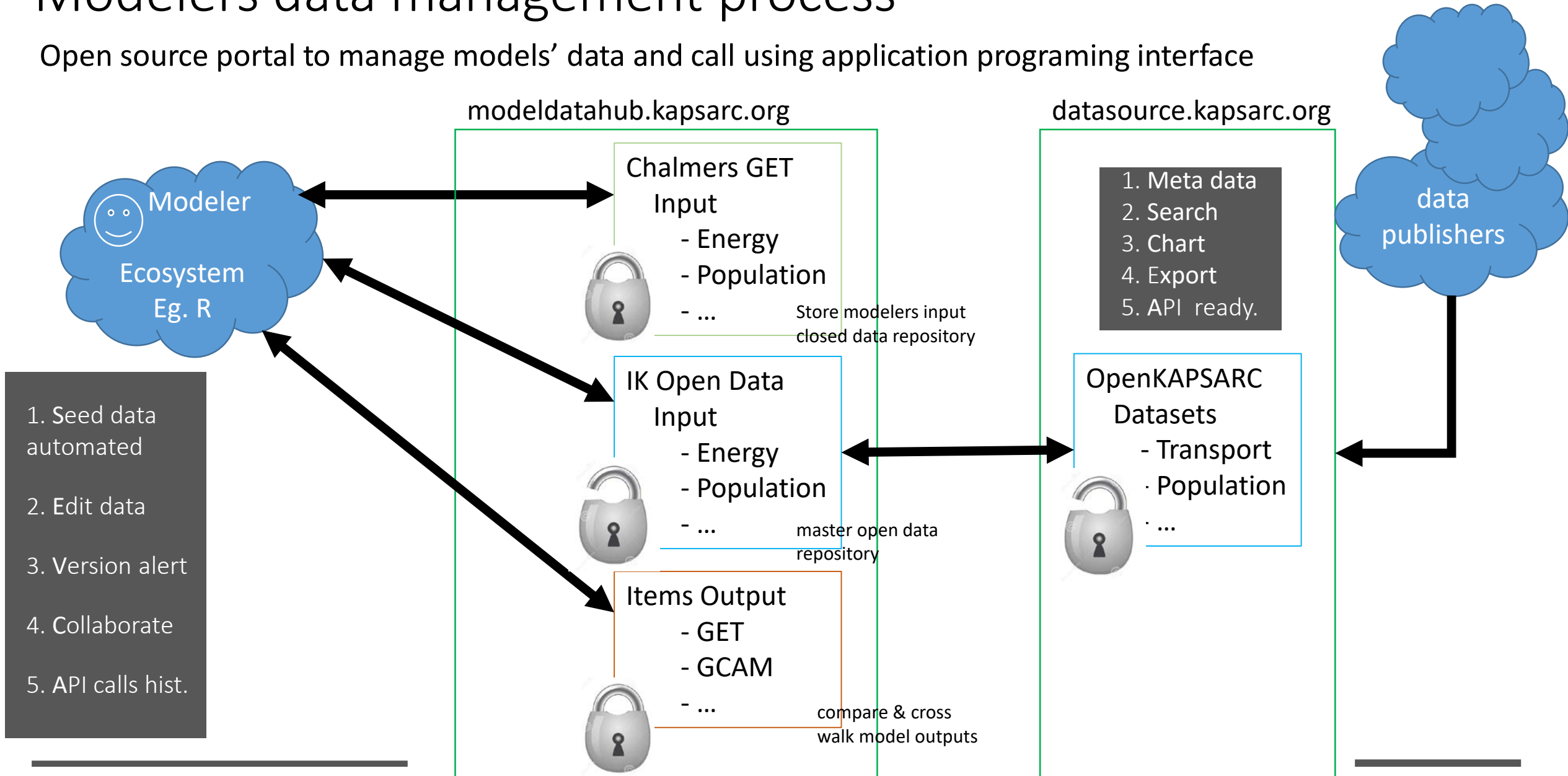
1. Integ. with eViews
2. Enhance meta data
3. On premise install
4. Five KAPSARC models
5. External ITEM, Policy

Example - iTEM-OpenKAPSARC Transport Database



Modelers data management process

Open source portal to manage models' data and call using application programming interface



1. Seed data automated
2. Edit data
3. Version alert
4. Collaborate
5. API calls hist.