



ROYAL INSTITUTE
OF TECHNOLOGY

North-Africa Power Pool Modelling

Paths to a Sustainable Energy Future



*In
collaboration
with*



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A known concept applied to Electricity Generation

- Electrification
- Influence of Renewables
- System Stability

System Sustainability

Access to Basic Energy Services

- Final Electricity Demand

Energy System

Analysis

Improved energy generation and distribution

Dealing with increased complexity

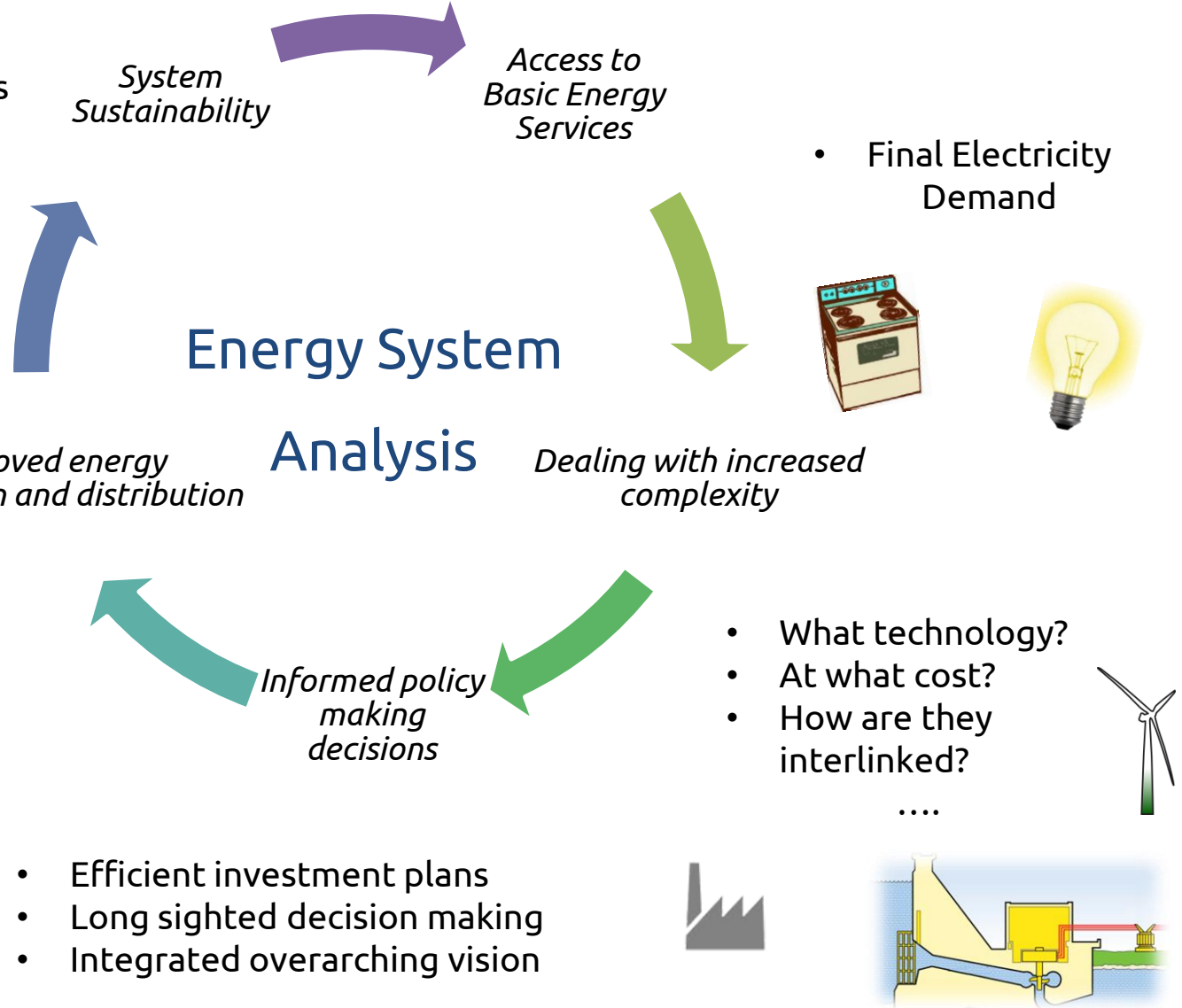
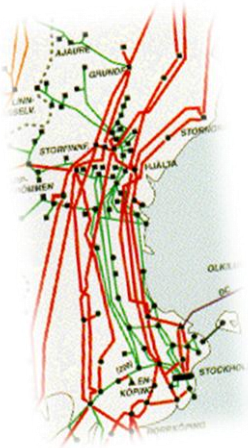
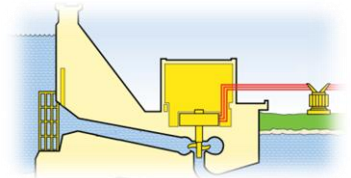
Informed policy making decisions

- System Reliability
- National and Trans-national integration

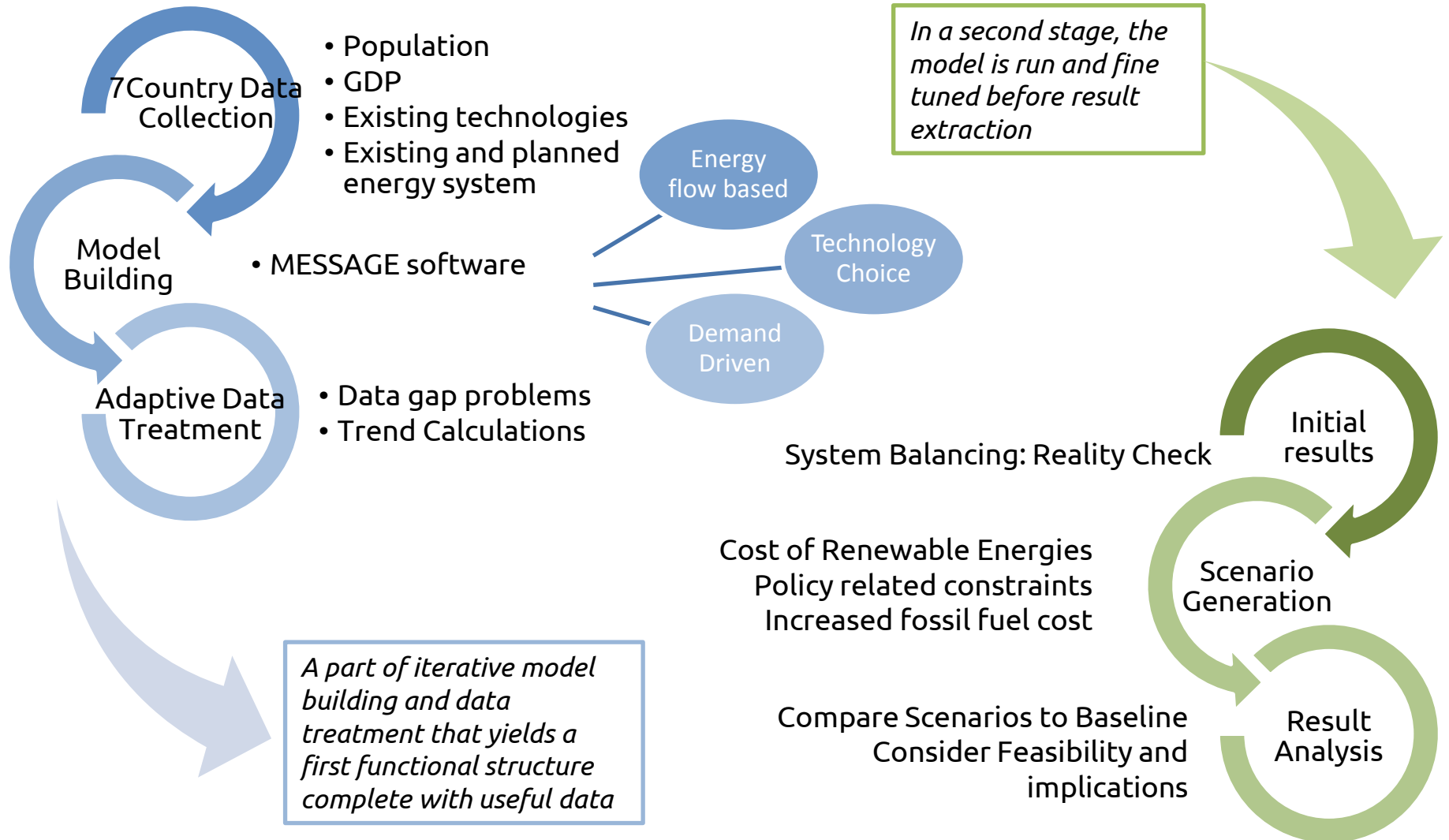
- What technology?
- At what cost?
- How are they interlinked?



- Efficient investment plans
- Long sighted decision making
- Integrated overarching vision



An Approach in Multiple Stages



A Dynamic and Comparative Scenario Analysis

FINAL GOAL

Answering essential questions through direct result comparison

Unserviced Electricity Problem

Decentralised grid solutions

Local and private Renewables

A definite option

Higher Interconnections

More Renewables

Higher Costs

Less stability of supply?

Not always

Resource displacement

Regional sharing of Renewables

More Stability?

Most Certainly

Other Scenarios need Modelling?

A repeatable and adaptable approach with a flexible structure

Fun Facts...

Open Source model and data pack
A thesis destined to capacity building in Africa
Workshops and Knowledge transfer ongoing
A First attempt at modelling the North Africa
A real collaboration with IRENA and a will to develop renewable power in the future