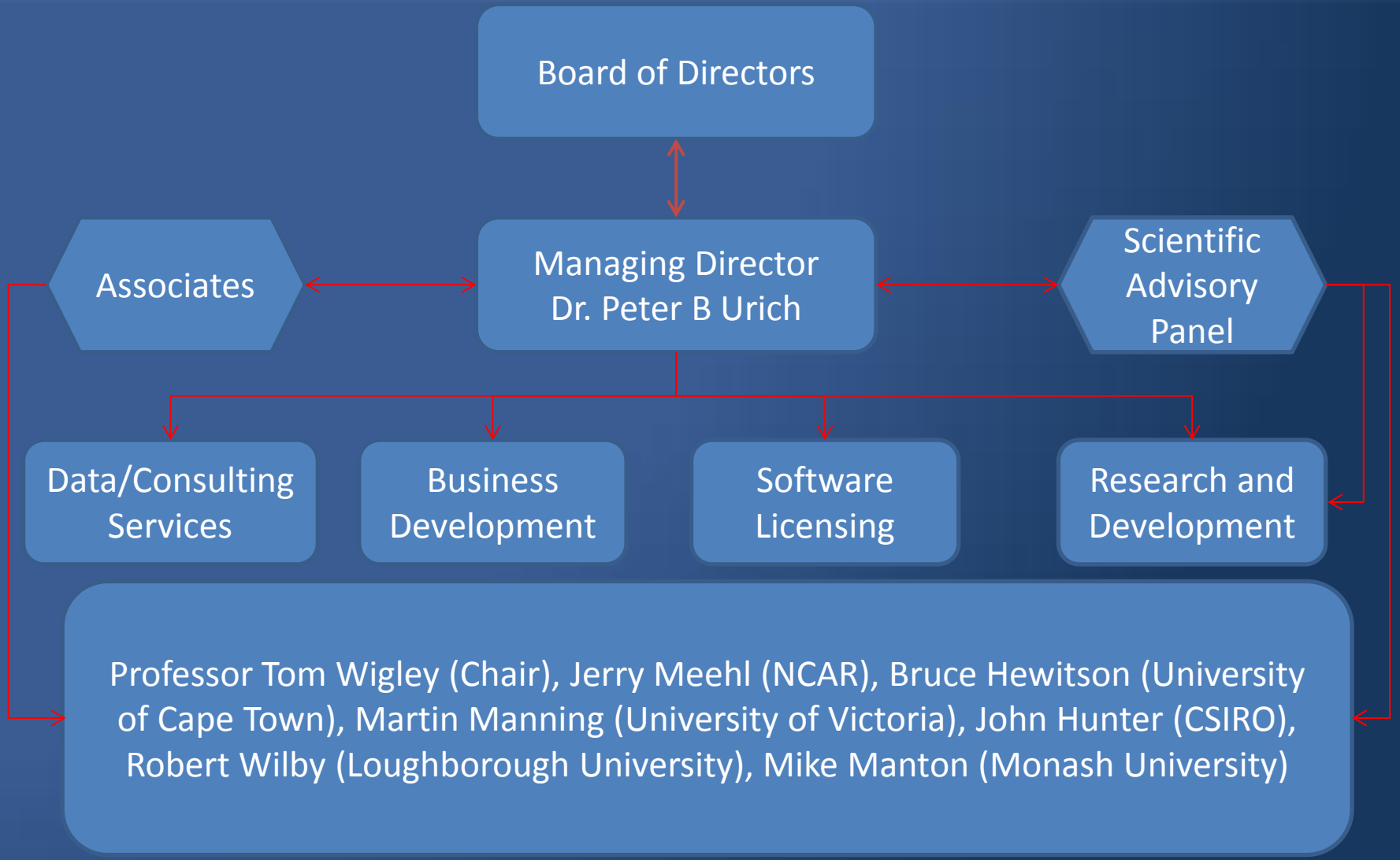
CLIMsystems
Products and Services

The Organisation



CLIMsystems

esri Understanding our world.

Welcome to
SimCLIM for ArcGIS

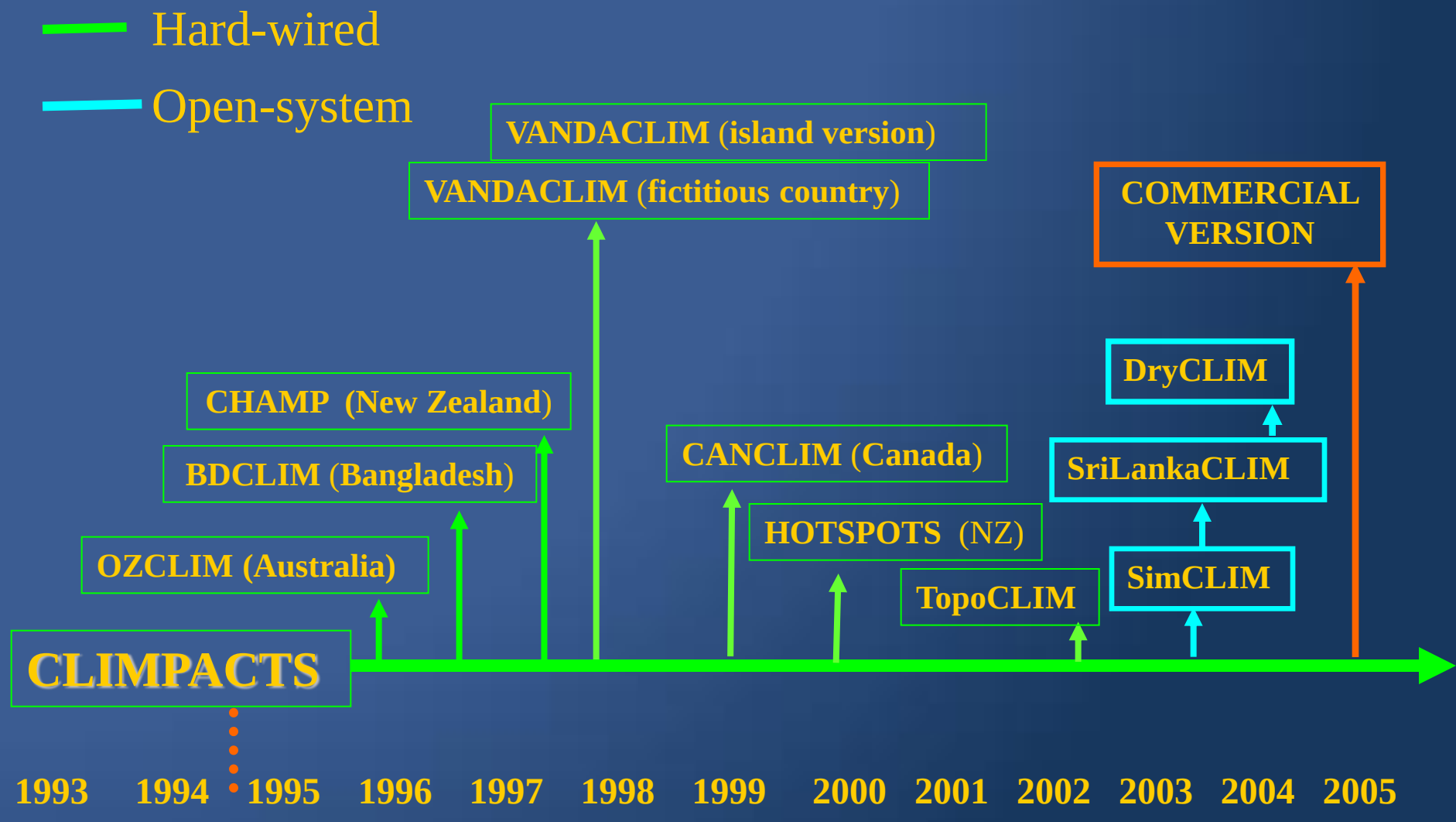
Click a product to find out more

SimCLIM for ArcGIS / Climate

SimCLIM for ArcGIS / Marine

2013 Special Achievement in GIS Awardee:
Esri User Conference, San Diego
July 2013

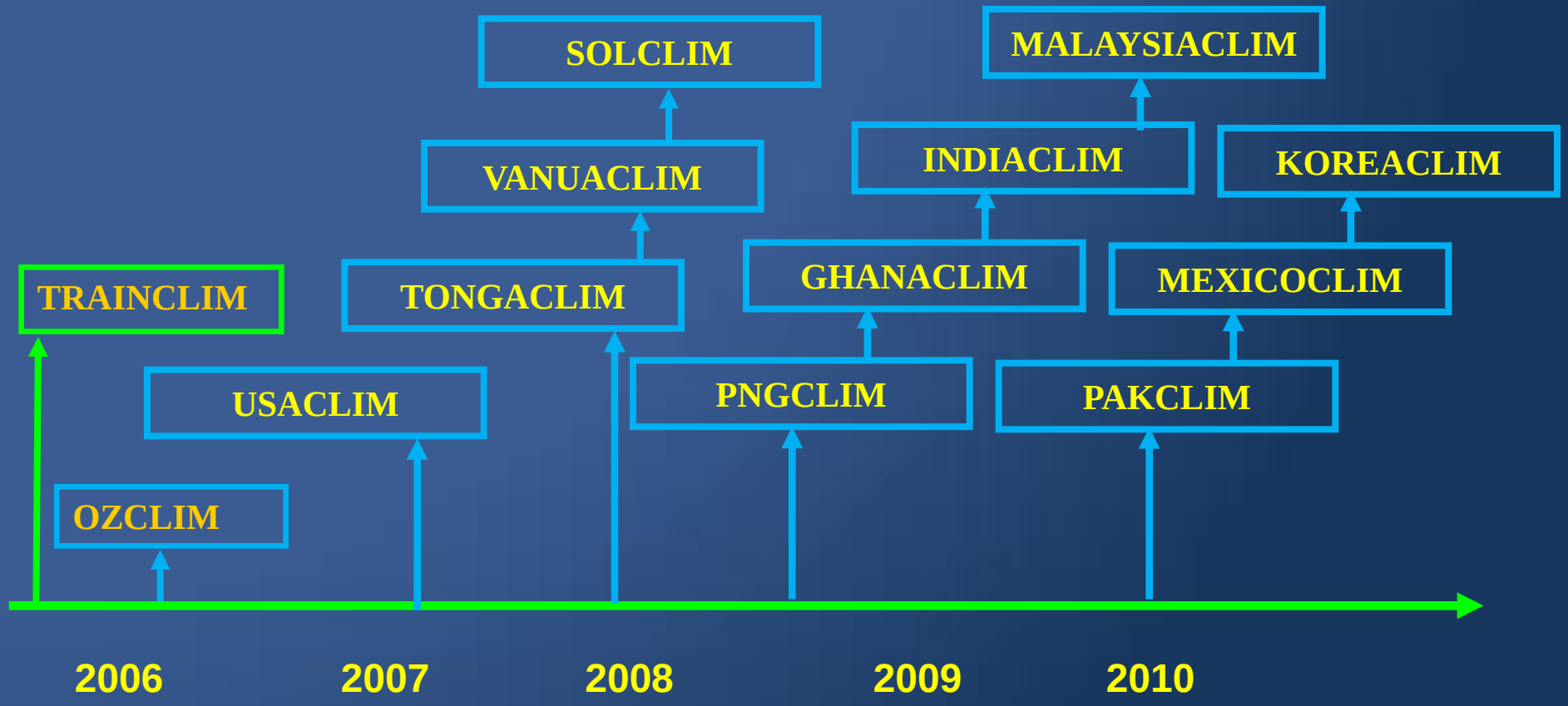
SimCLIM Family Tree



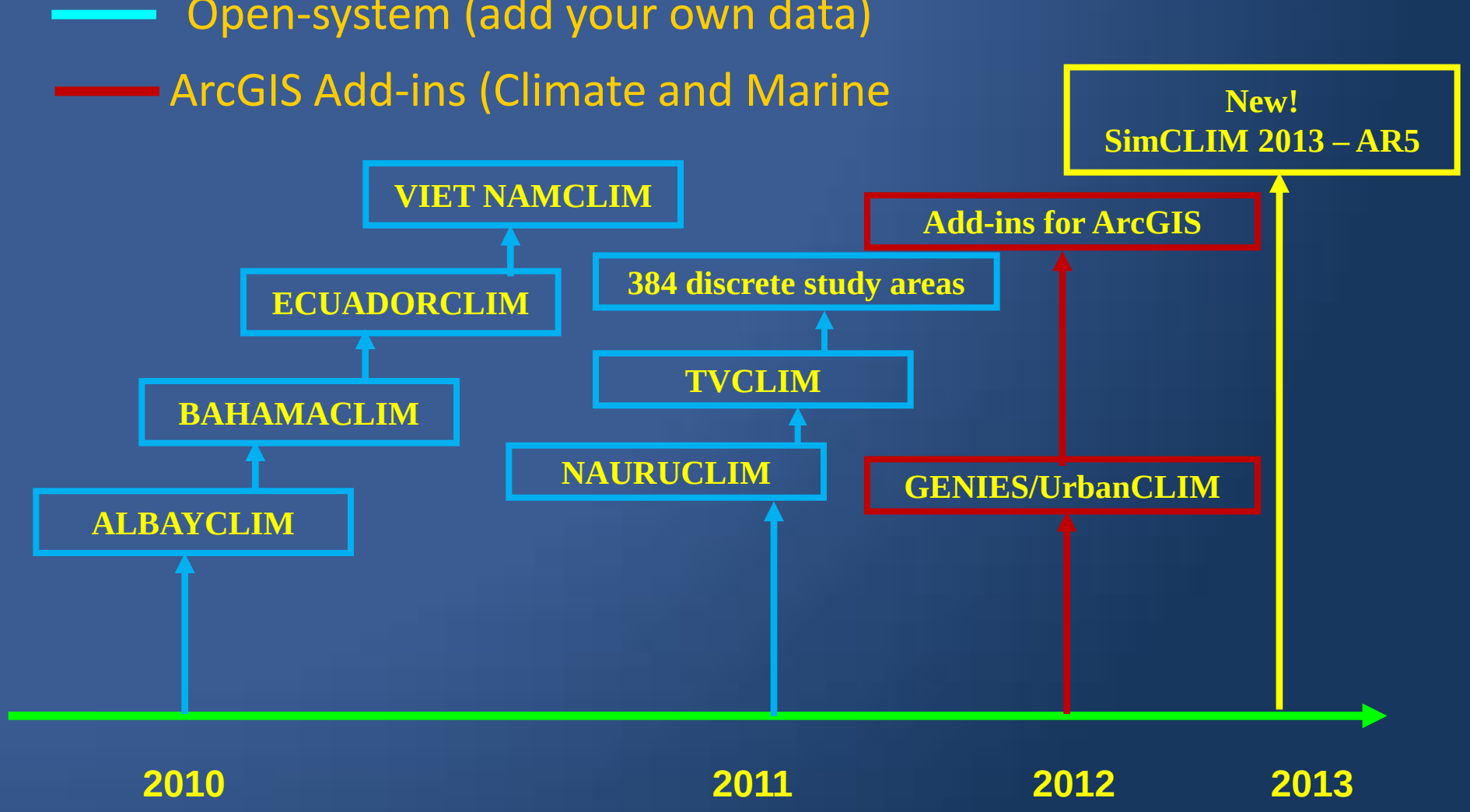
SimCLIM Family Tree

Hardwired

Open-system (add your own data)



SimCLIM Family Tree



SimCLIM 2013

- Updating (in the Past)
  - Without SimCLIM outputs typically hard copy reports with limited shelf life
  - Use by date short owing to new scientific knowledge and availability of new global climate model runs, improved databases etc
  - Not long before results of studies needed to be reassessed but prohibitively expensive doing it the old way
  - Relatively easy with SimCLIM 2013
  - Import new spatial and time series data and modify components of impact models
  - SimCLIM 2013 is an evolving tool that changes as the science changes

SimCLIM 2013

- Part of the Decision Making Process (Present)
  - Rather than science apart from policy and planning . . .
  - SimCLIM 2013 is designed to bridge the gap
  - While scientifically rigorous it is a tool that is accessible, user friendly, and visual outputs can be easy conveyed to non-scientists in a policy and planning context
  - Can do ‘on the spot analysis’ with non-scientific community to help illuminate the implications of for example, different greenhouse gas emissions (RCPs).
  - Encourages planners and policy makers to engage with the science and to be part of the process rather than passive recipients of knowledge

What's New With SimCLIM 2013

- 40 GCMs with complete runs to 2100 for min, max, mean temp, precip, and in some areas wind and solar radiation (Australia and all its States and Territories has all six) for spatial analysis
- Spatial data in SimCLIM 2013 can be used with SimCLIM for ArcGIS/Climate
- New baselines – for Australia generated by BOM and included in SimCLIM 2013
- New CMIP5 extreme daily precipitation process data for GEV analysis (22 GCMS)
- 64 bit capability for handling large CMIP5 data sets
- Updated with latest RCPs (2.6, 4.5, 6.0 and 8.5 runs and climate sensitivity (low, medium and high)
- Preloaded with nearly 8,000 updated BOM historic time series data sites
- New CMIP5 SLR datasets for the world's oceans (22 GCMs)
- New User Interface (UI) and updated processes for more efficient processing
- Extensive documentation on data processes and FAQ available on-line
- Training available in-house or through webinars and training documents

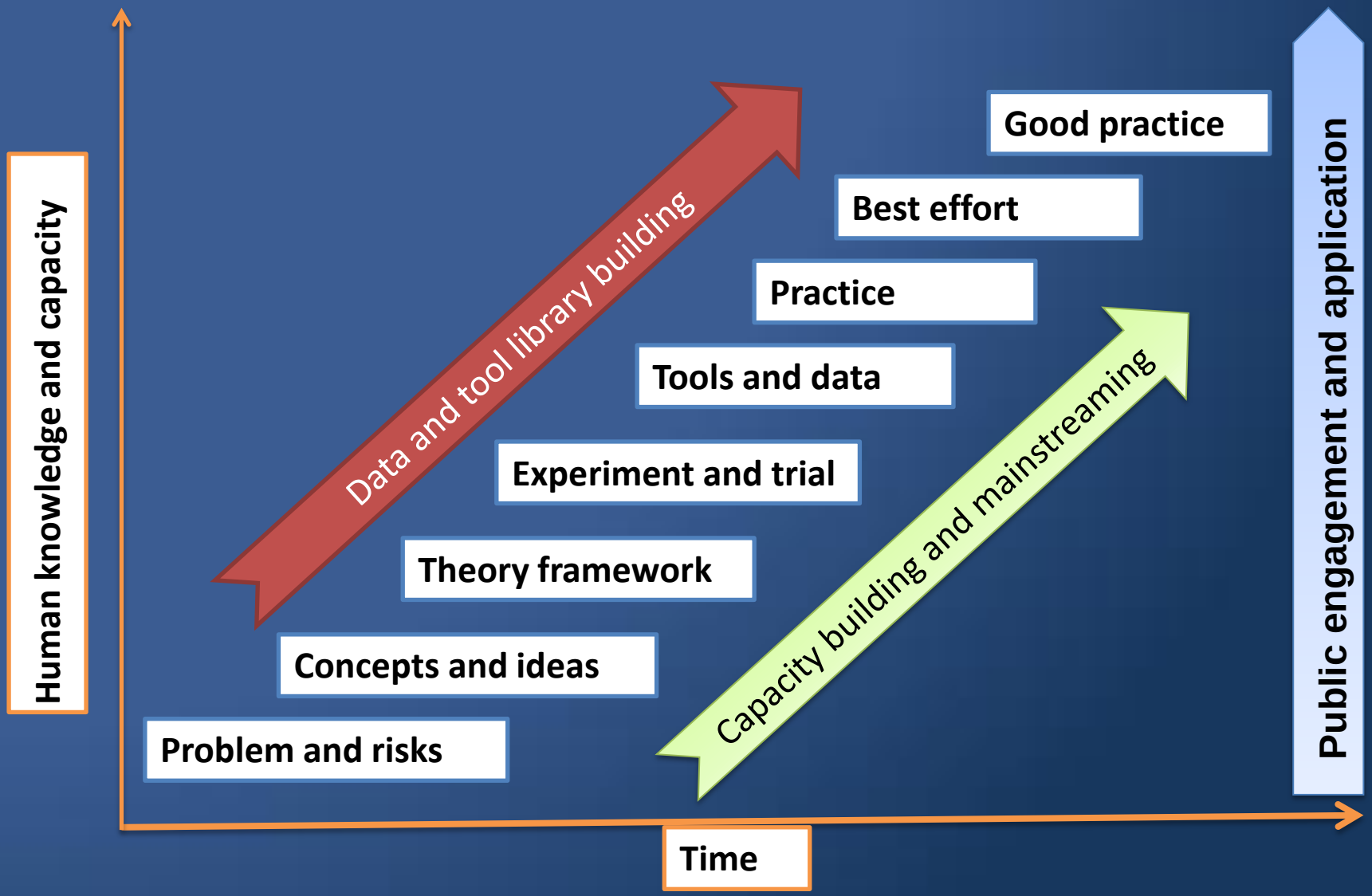
CLIMsystems Services: Features

- Efficiency
- Flexibility
- Speed of response and delivery
- Ability to hire
- Commercial acumen
- Creativity, enterprise & energy
- Independence
- Ownership/holding of key databases and proprietary technology
- Connections to other producers
- International networks

CLIMsystems Services Features

- Access to new technology and the know-how to use it efficiently
- Better incentives for project performance
- Creative solutions for the design and implementation of programmes
- Qualified staff
- Flexibility over fieldwork (such as working at night)

Development ladder of adaptation from concept to good practice

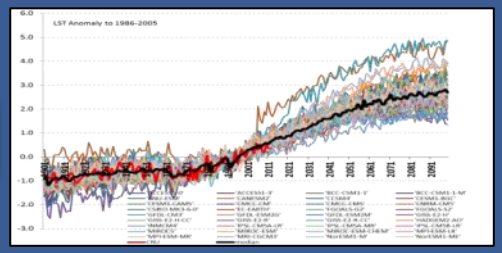


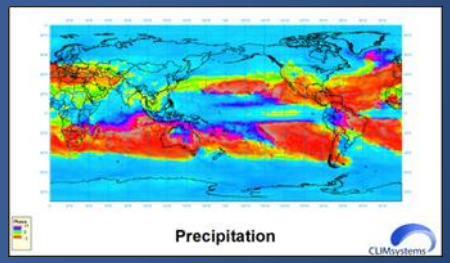
How CLIMsystems can provide support

Transforming Big Data into useful knowledge for Climate Resilient applications

CLIMsystems Data service

Observations

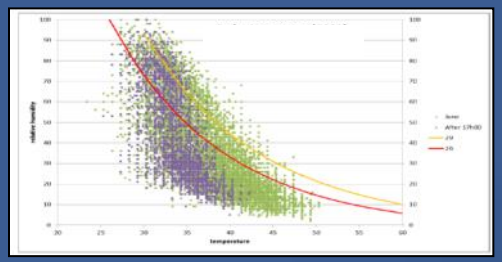


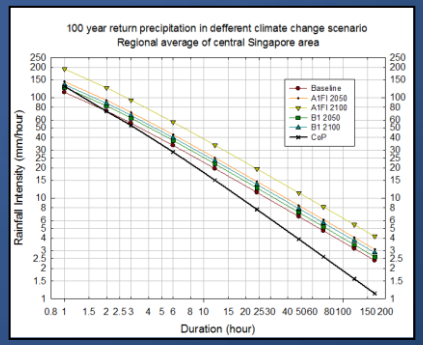


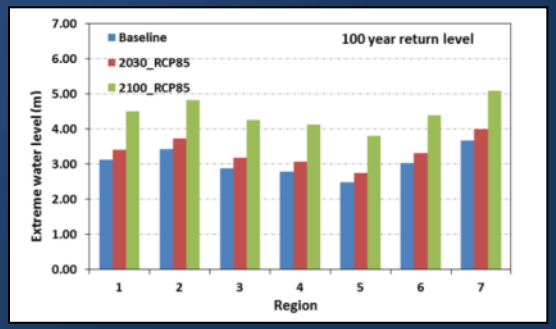
GCM/RCM

Historical and climate change projections

Infrastructure specific design
Climate/weather file shift



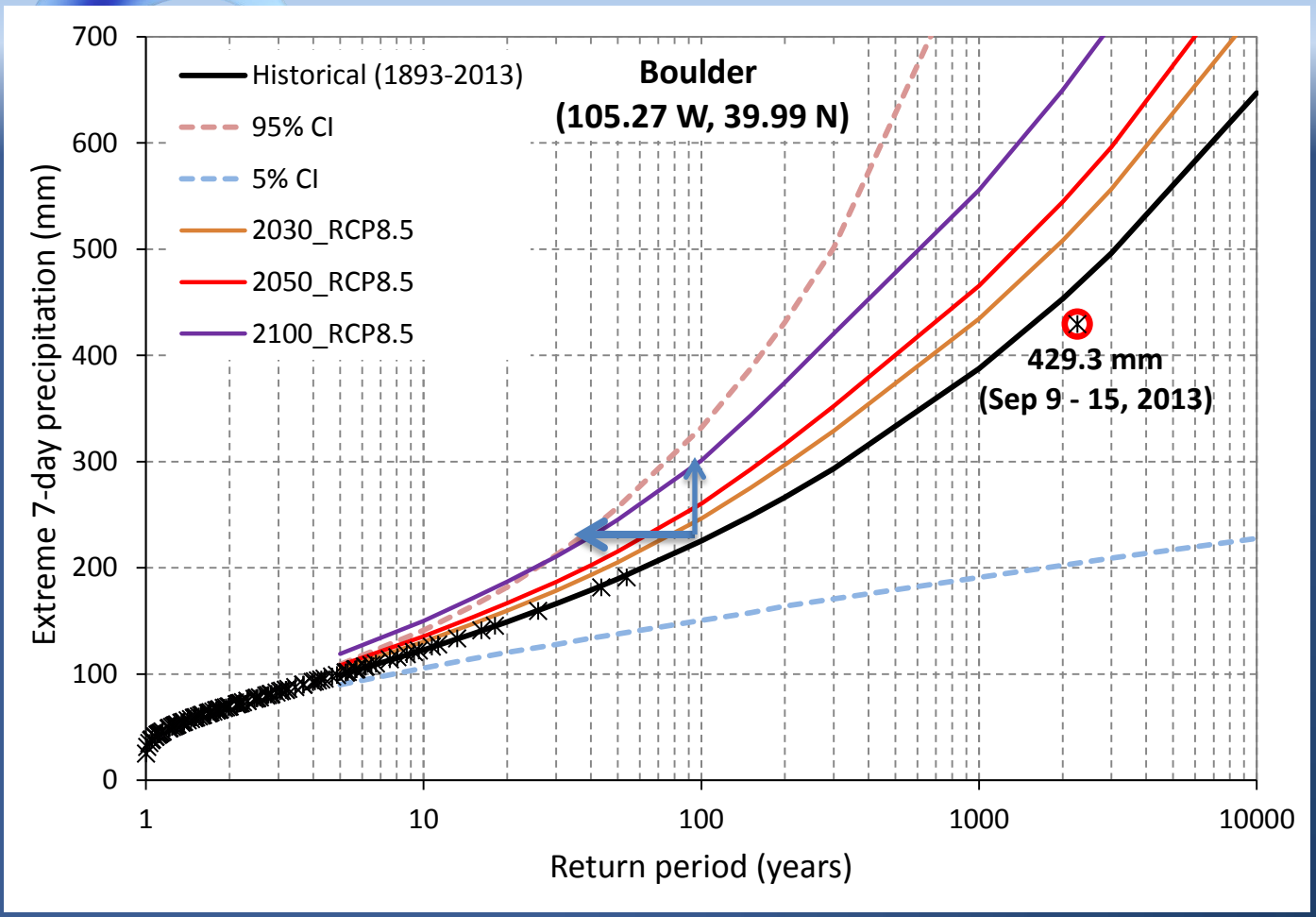


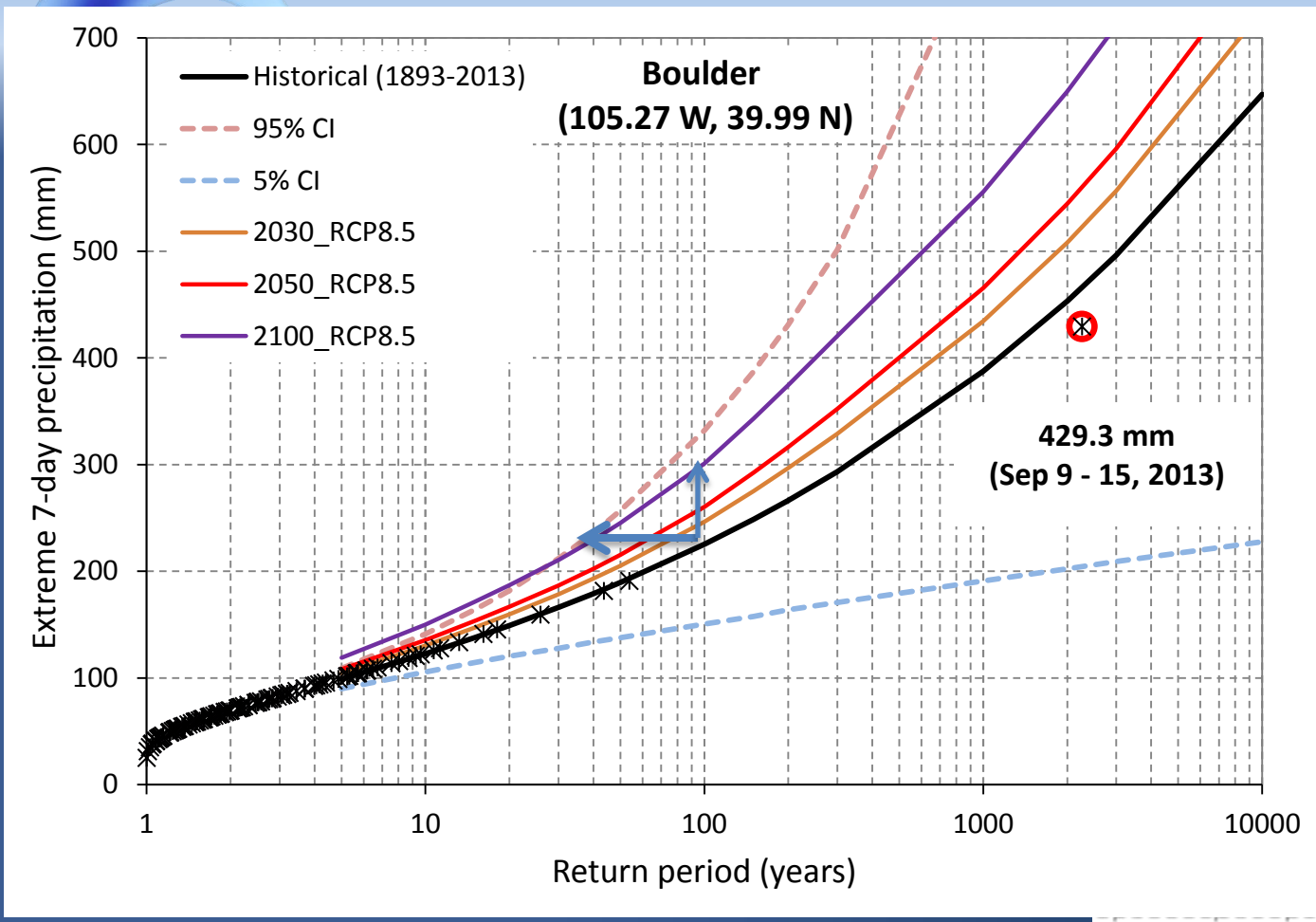


Extreme temperature, heat stress

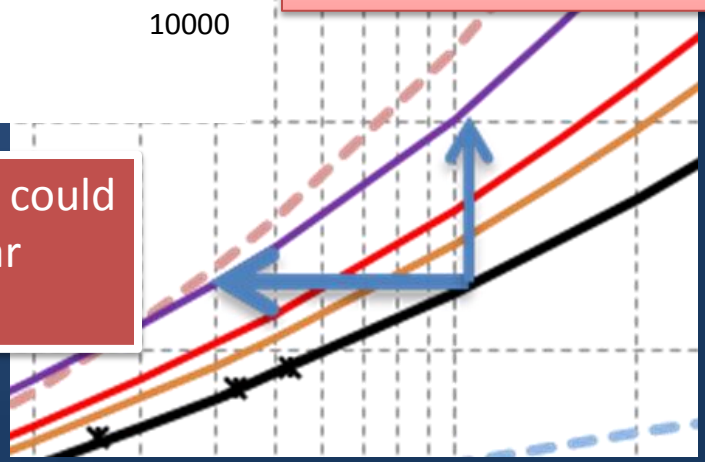
Precipitation IDF, DDF shift

Extreme water level


Historical (1893-2013)
95% CI
5% CI
2030_RCP8.5
2050_RCP8.5
2100_RCP8.5
Boulder
(105.27 W, 39.99 N)
429.3 mm
(Sep 9 - 15, 2013)
Extreme 7-day precipitation (mm)
Return period (years)
0
100
200
300
400
500
600
700
1
10
100
1000
10000

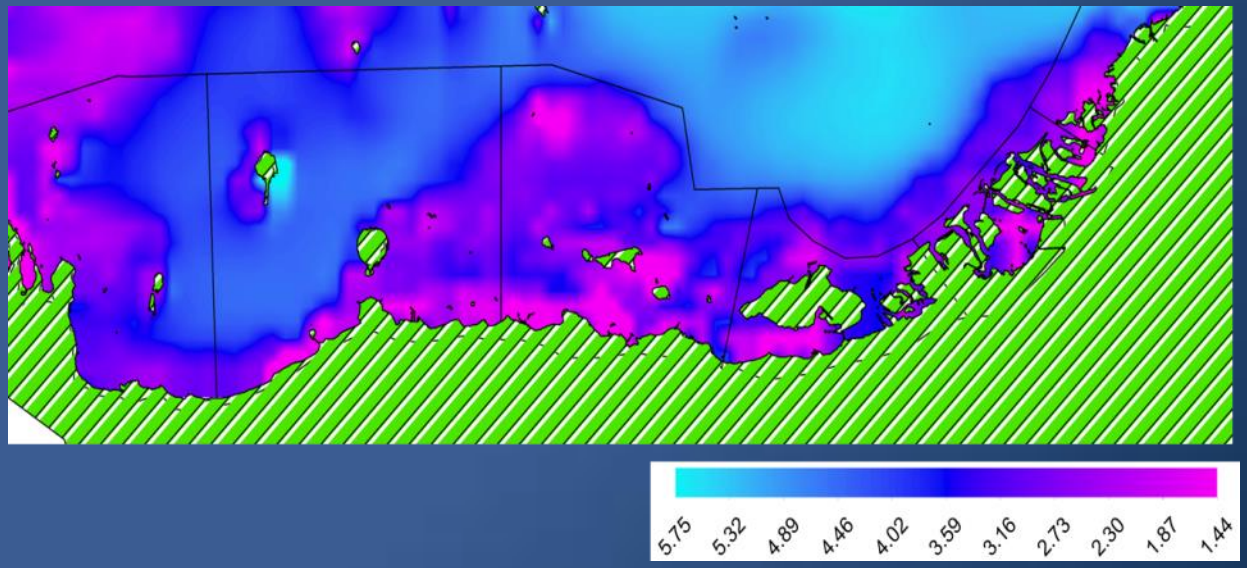


1/100 year even 220 mm could increase to 300mm



100 year event could become 30 year event

Abu Dhabi Coastal Management

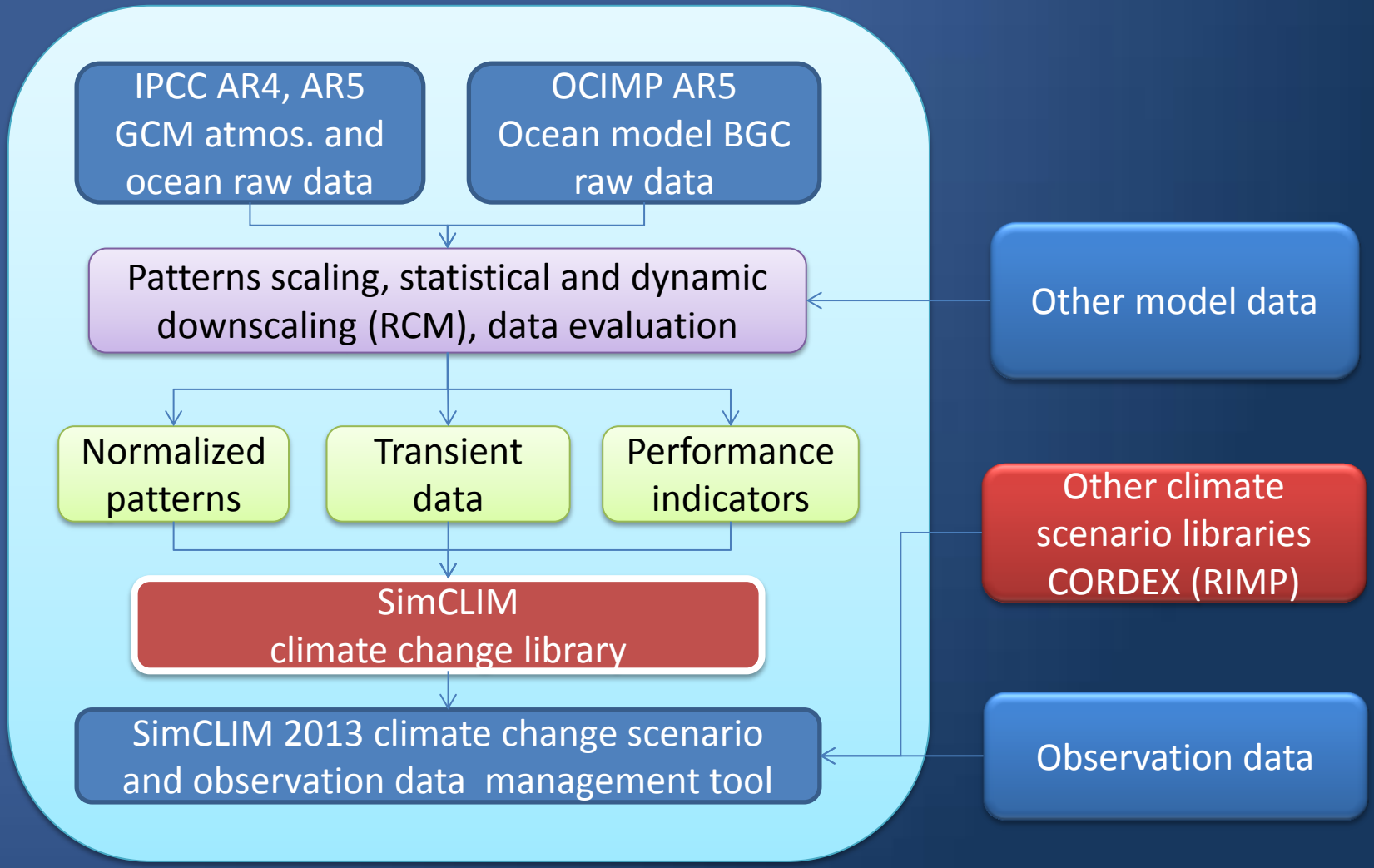


Abu Dhabi 100 year return extreme water level (2030 RCP8.5 high)

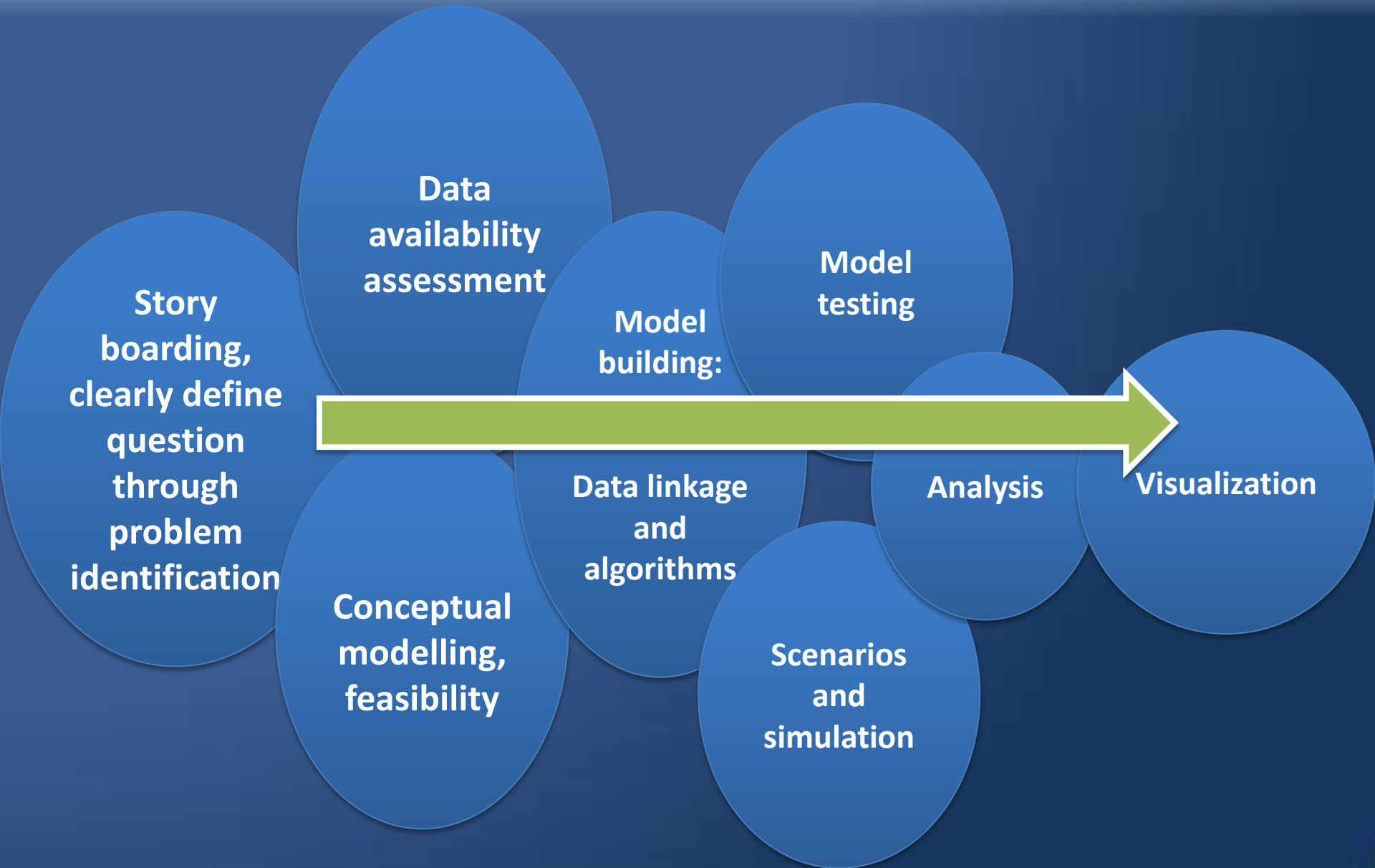
SPI & SPEI with Pasture Growth Index (SPGI)

Bi-Week SPGI: the standardized anomaly of the average pasture growth rate during its last 14 days

SimCLIM 2013 Library Structure



Process for Climate Model Application



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Thank you!