

Prey

Functional Group

MPF

Stage

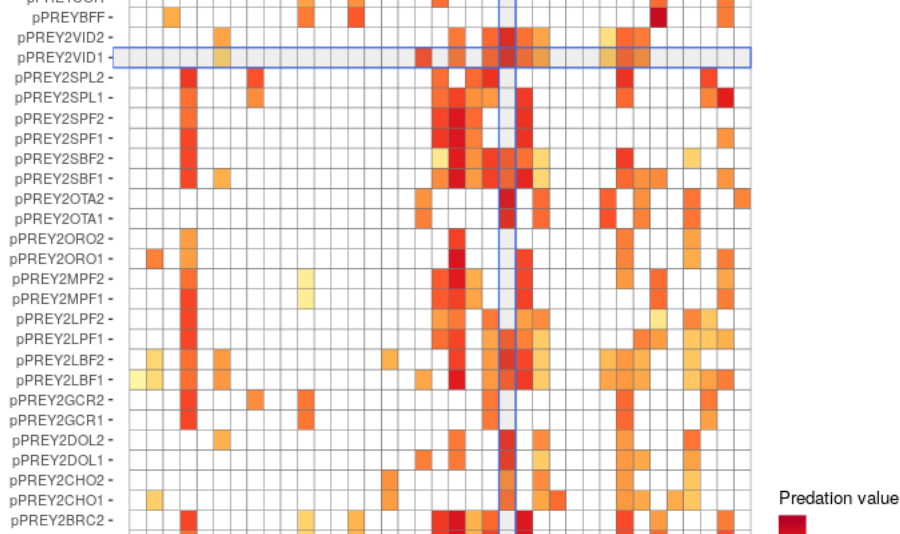
Adult

Original Value:

0.08

Current Value:

0.08



# Atlantis Tools

## How to rule Atlantis

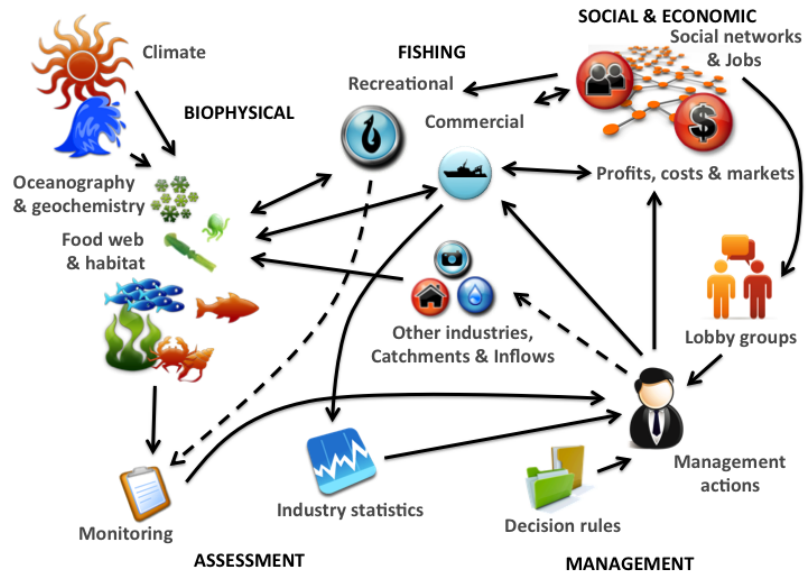
Javier Porobic

CSIRO Ocean & Atmosphere  
[www.csiro.au](http://www.csiro.au)



# Why these tools?

- Huge amount of data
  - Configuration
  - Forcing
  - Outputs
- Diff. levels of complexity
  - NetCDF
  - Plain text
- Time consuming

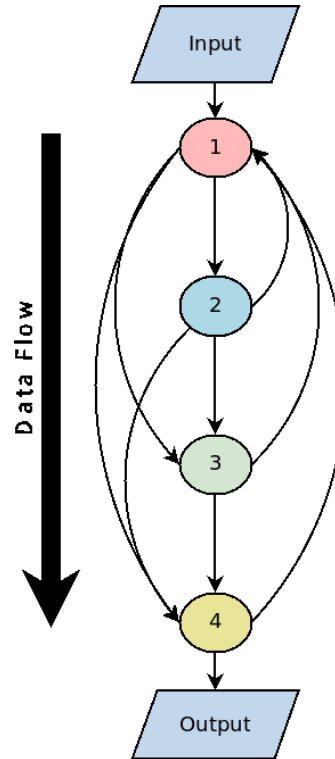


# What tools we have so far

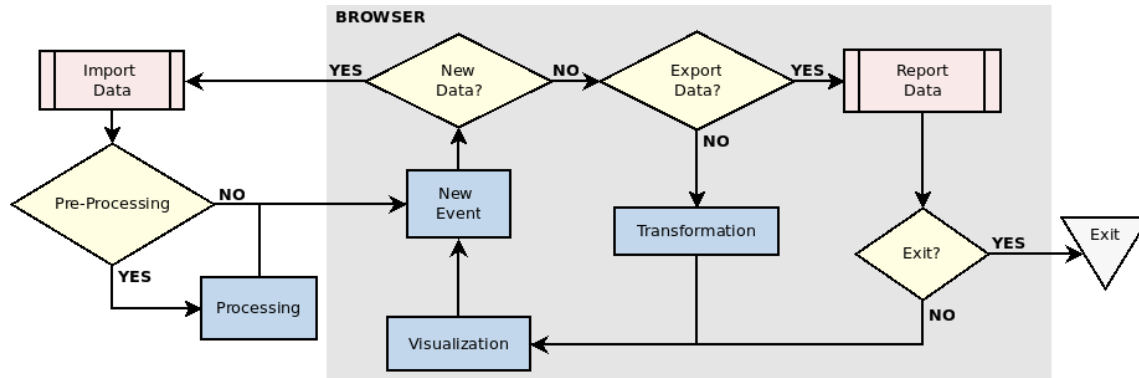
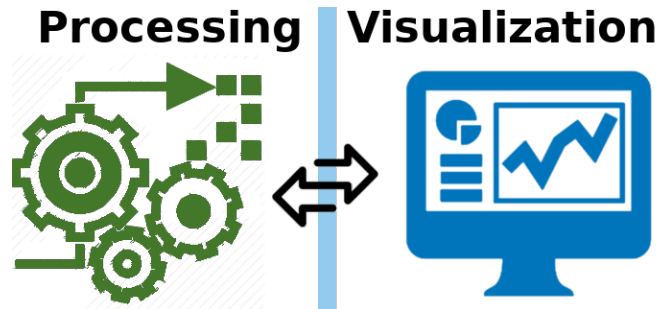


# Functional Reactive Programming

- Avoids data overload
- Fast execution



# General structure





## shinyAtlantis : Exploring the data



- Oceanographic forcing
- Initial conditions file
- Feeding and growth
- Biology parameter file





# ReactiveAtlantis: Ruling Atlantis





# Survey: What the community needs?

- **General questions**

Work with R	95%
Outputs in PDF + REACTIVE	70%
Size structure	60%
Spatial structure ( <b>warning</b> )	31%

- **Tool questions**

Focus on calibration	60%
Tools implement the early-warning approach	50%
Tools focusing on predator and prey dynamics	90%
Model skill assessment and Ecosystem indicators	80%

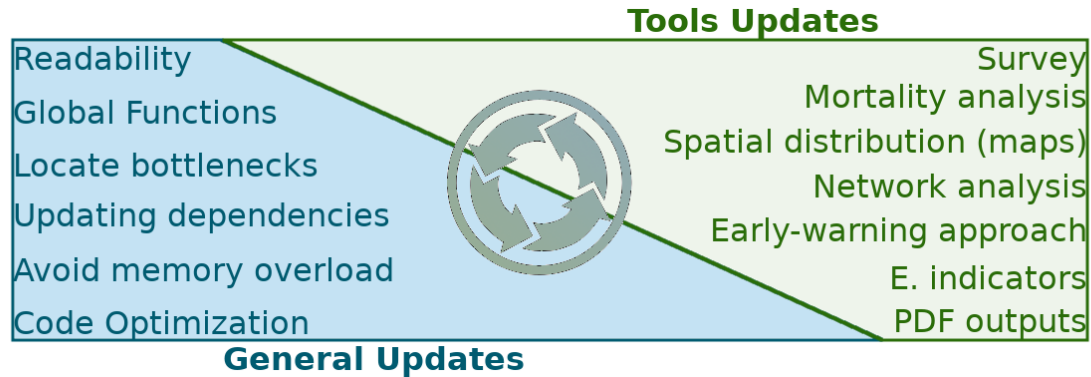
- **Suggestions and comments**

- Calibration of Key parameters
- Working on Machine learning



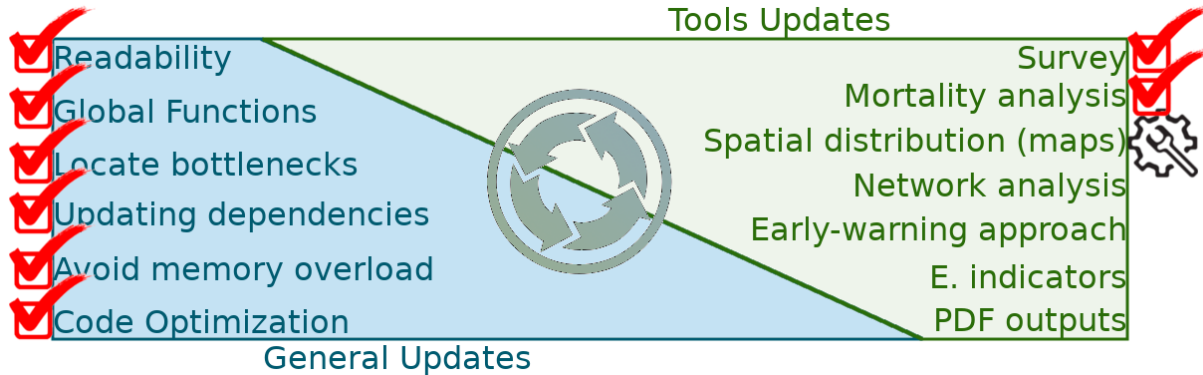


# How much progress have I made so far?



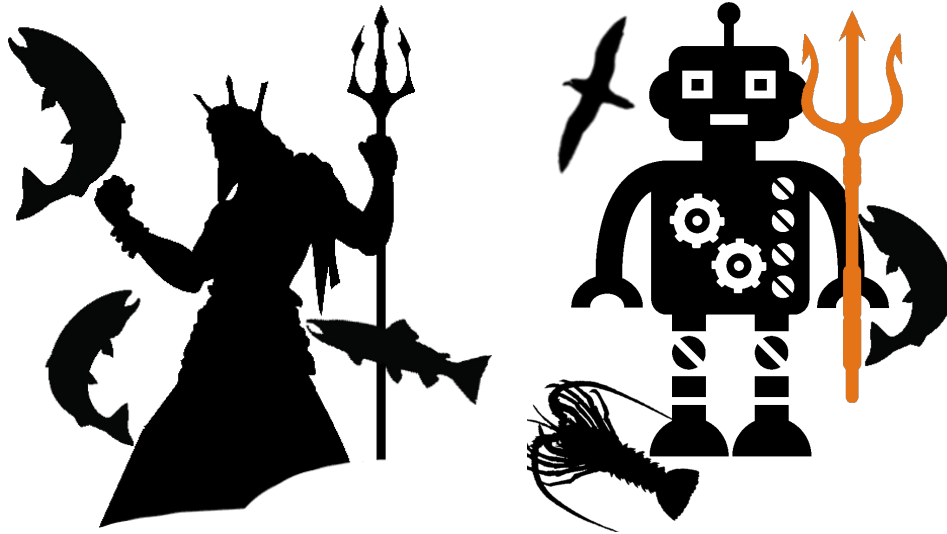


# How much progress have I made so far?



- 1000x faster
- It's ready to be a proper CRAN package
- Figures are more readable (most of them)
- Color blind friendly
- Upcoming tools focused on user needs

# Engagement / collaboration



# Thank You

## Ocean & Atmosphere

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