



Upgrading numerical tools for BSM exploration : Hyperiso

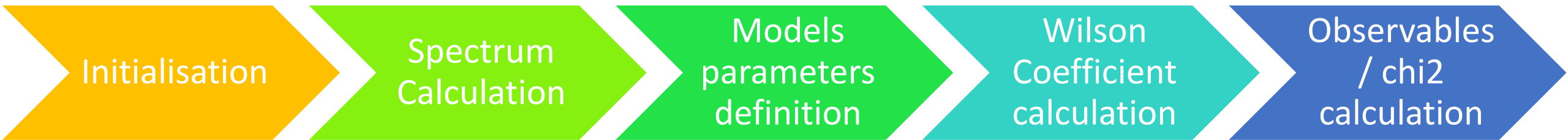
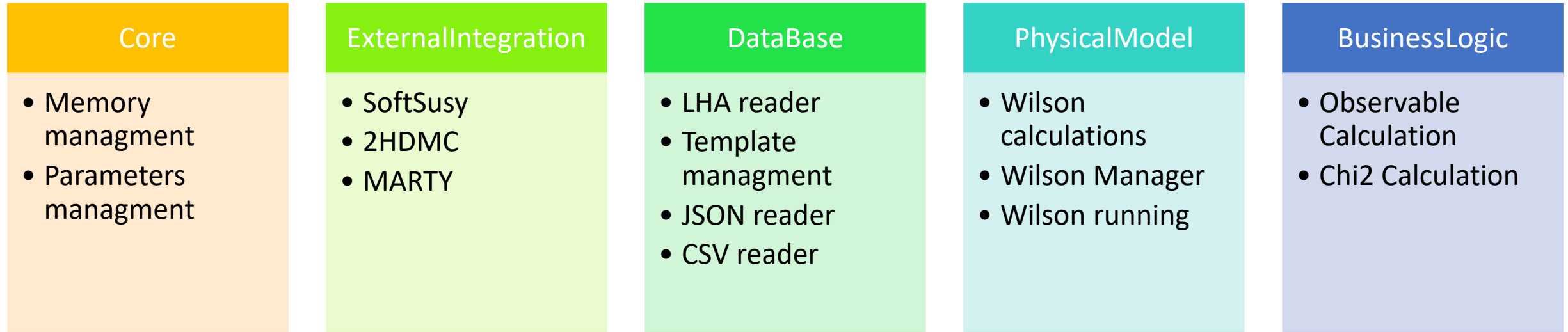
Théo Reymermier

Niels Fardeau

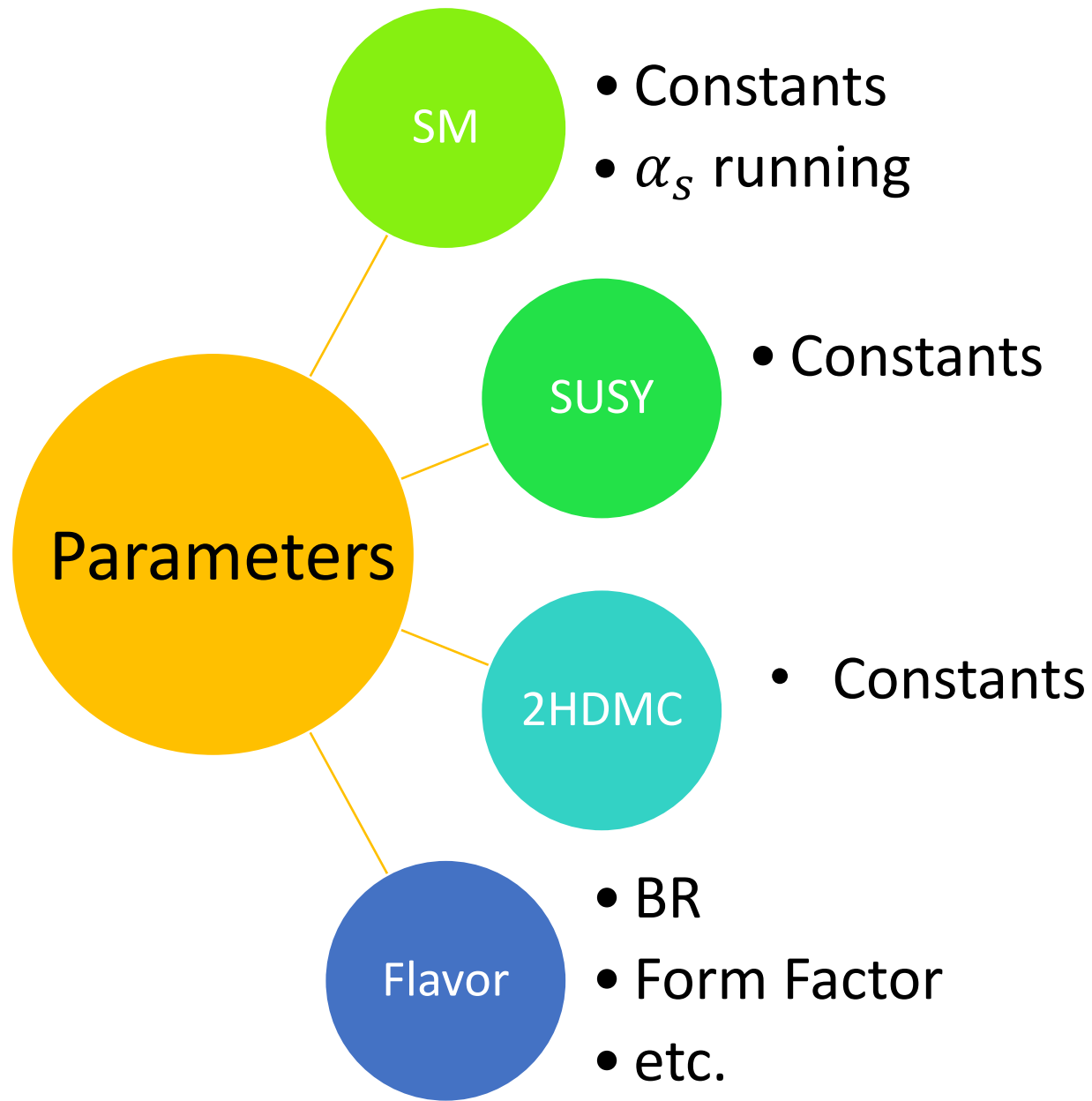
4 octobre 2024

Mini-Workshop (Nazila Team)

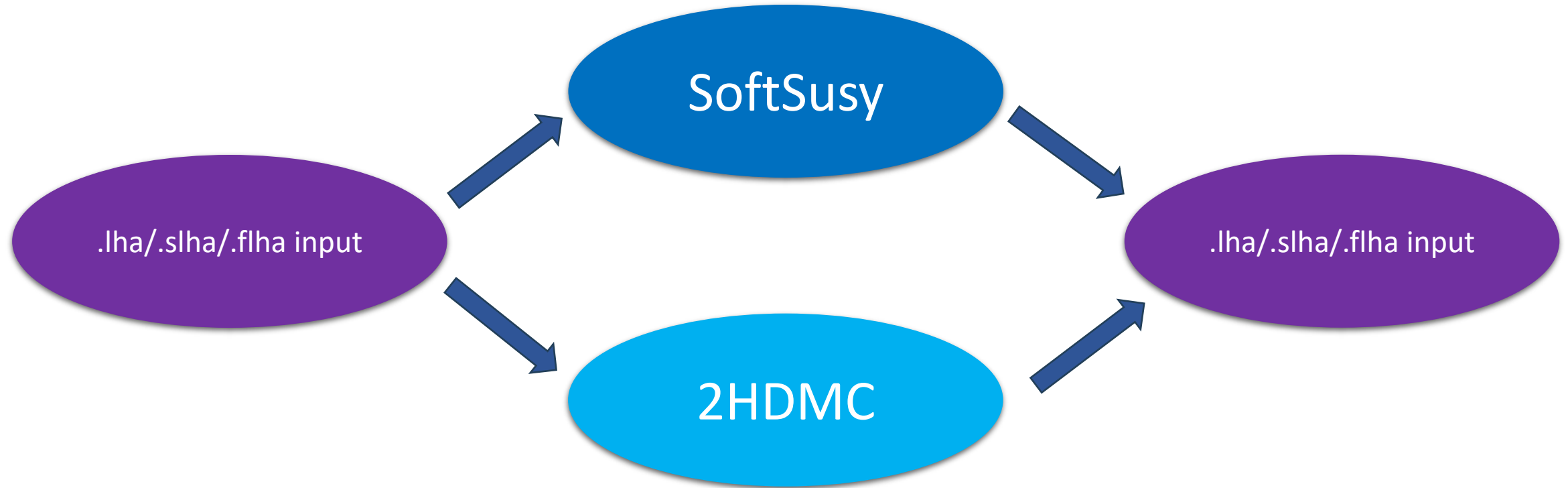
Hyperiso

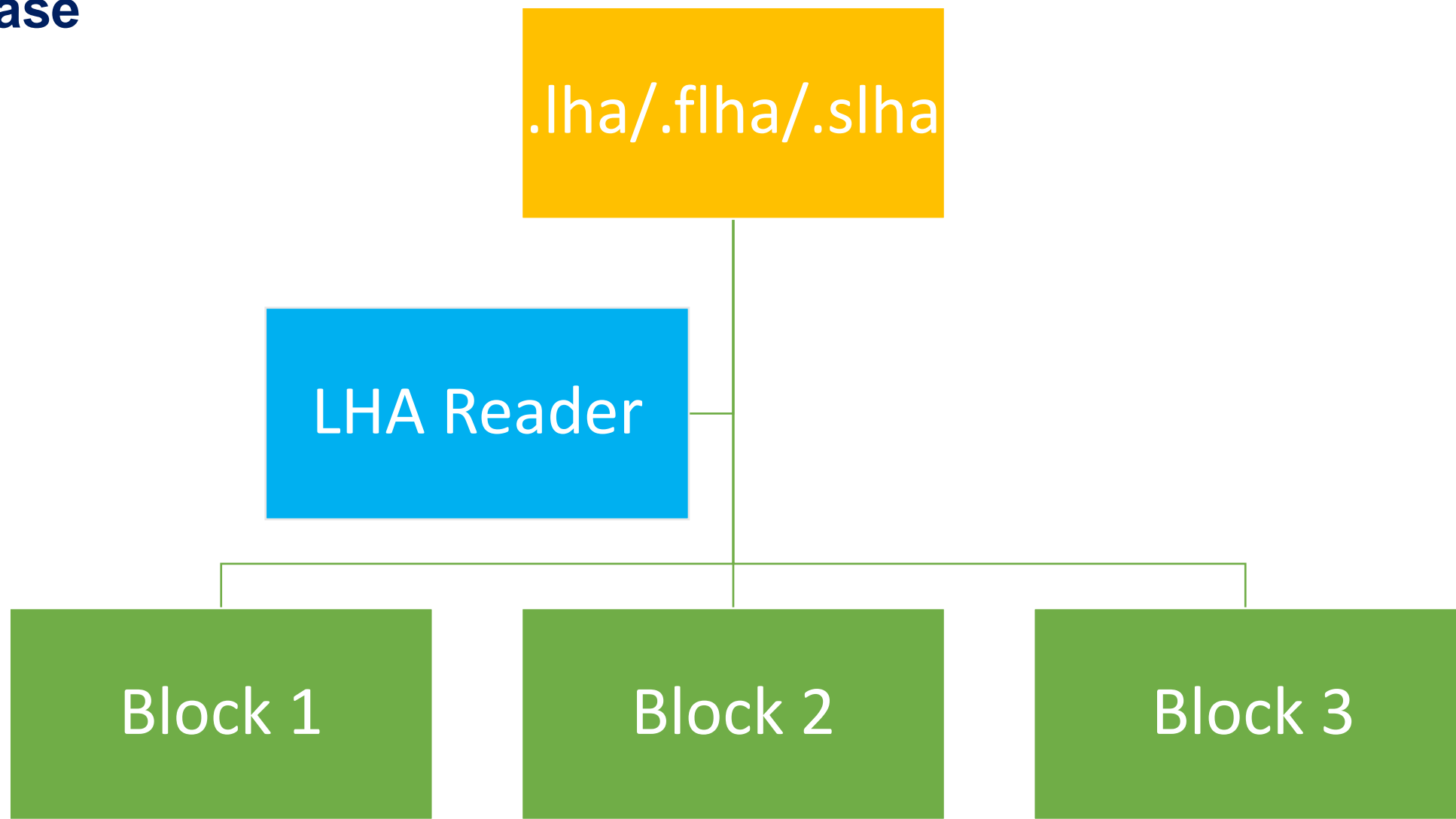


Core

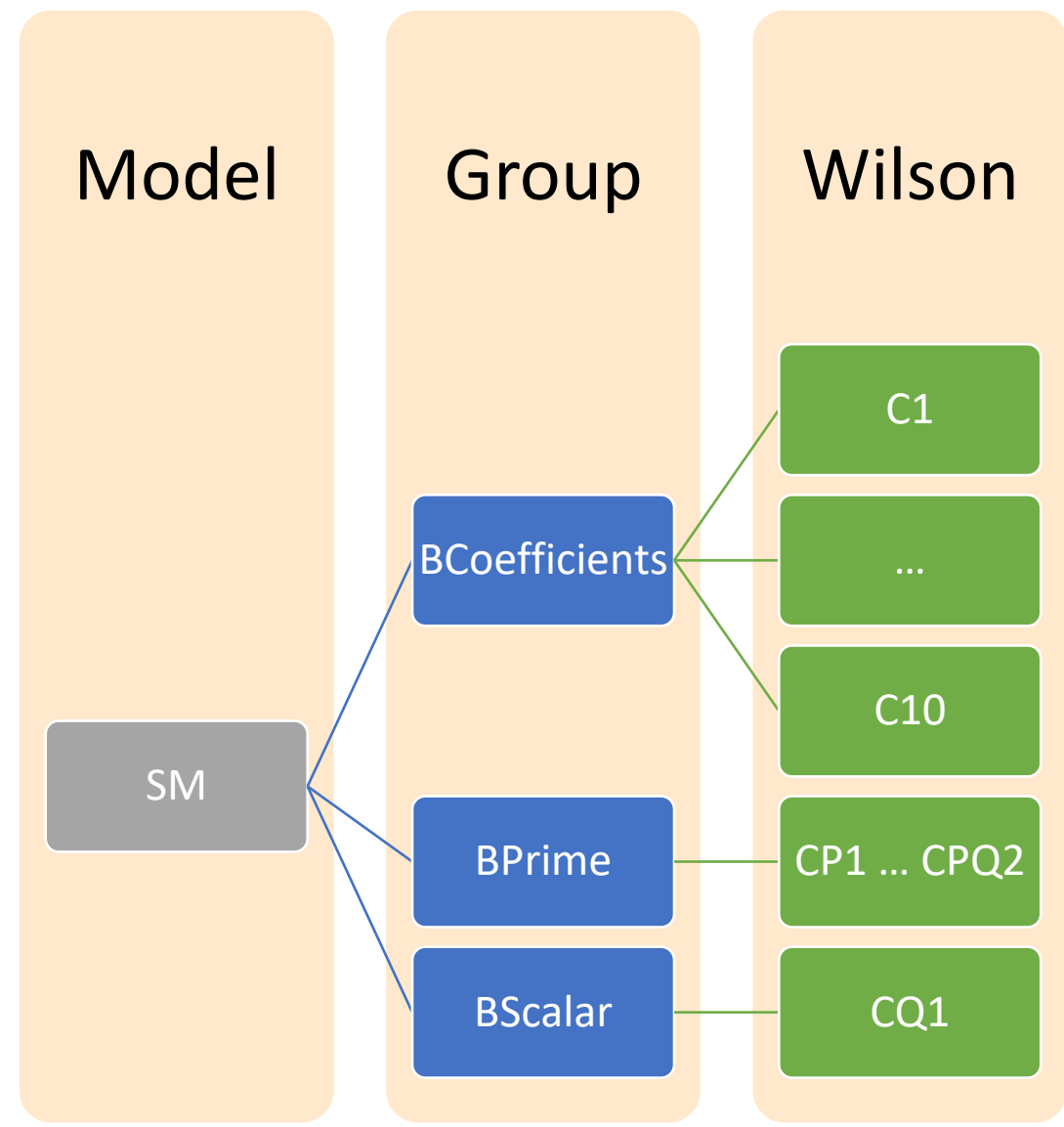
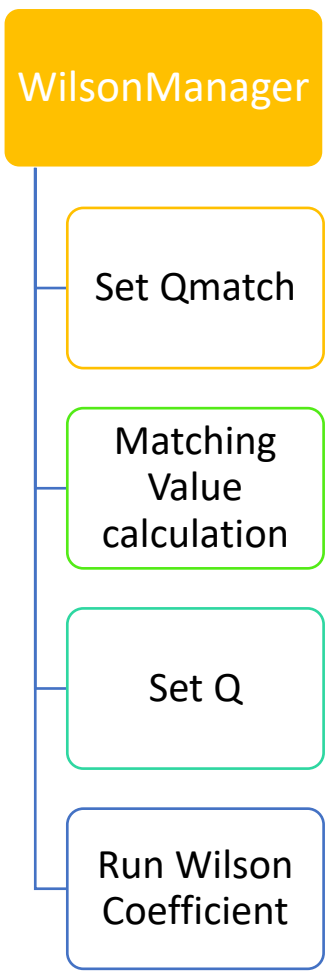


External Integration (Part I)

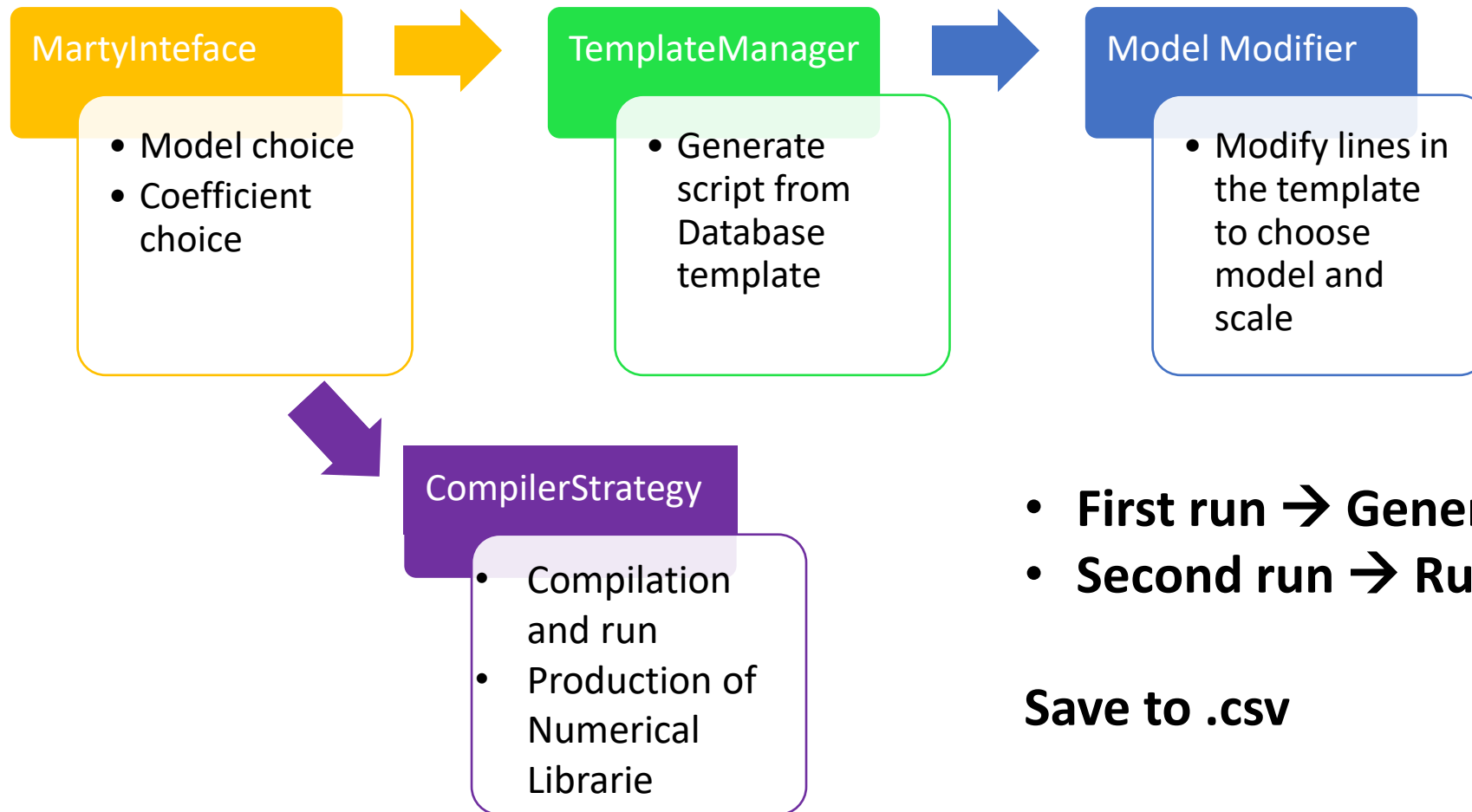




PhysicalModel



ExternalIntegration (PART II)

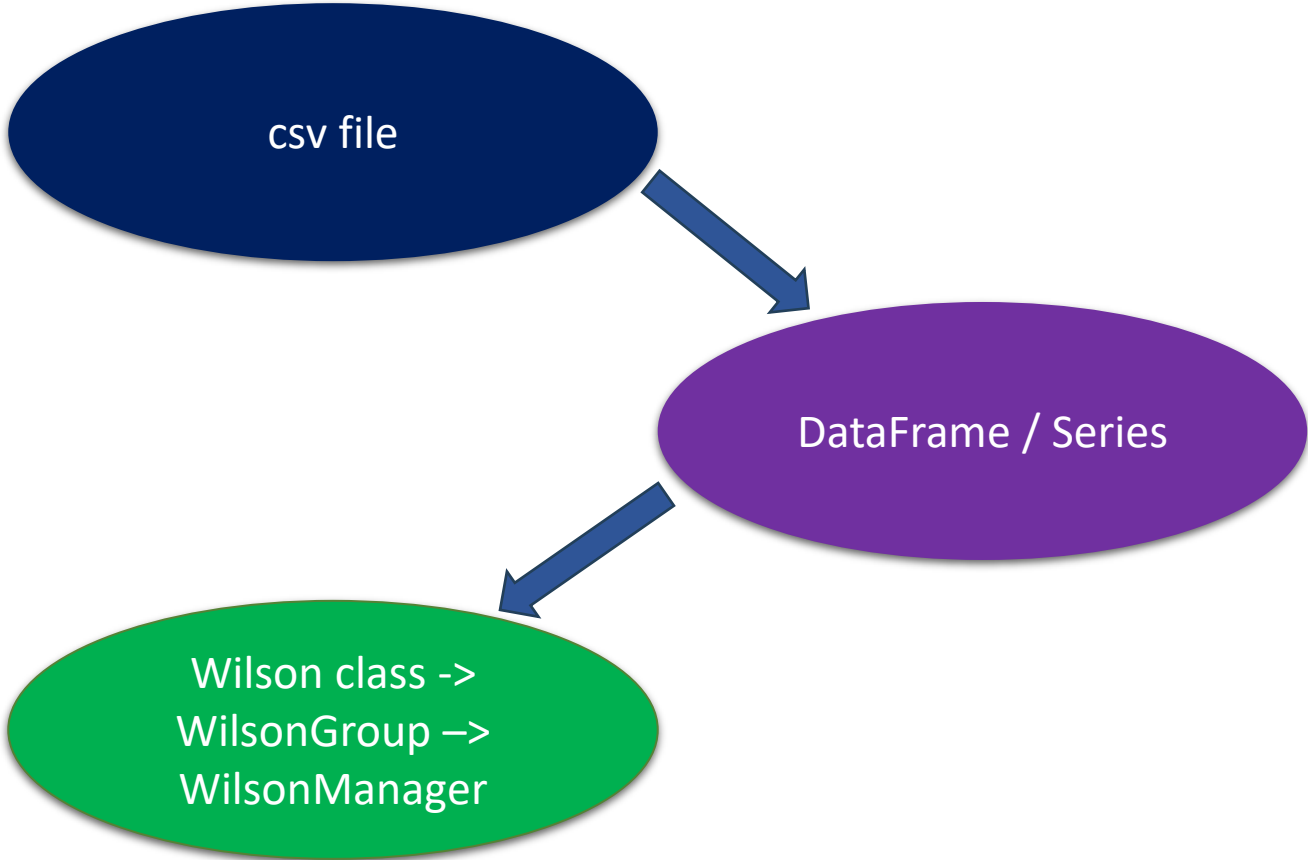


- **First run → Generate Librarie**
- **Second run → Run library**

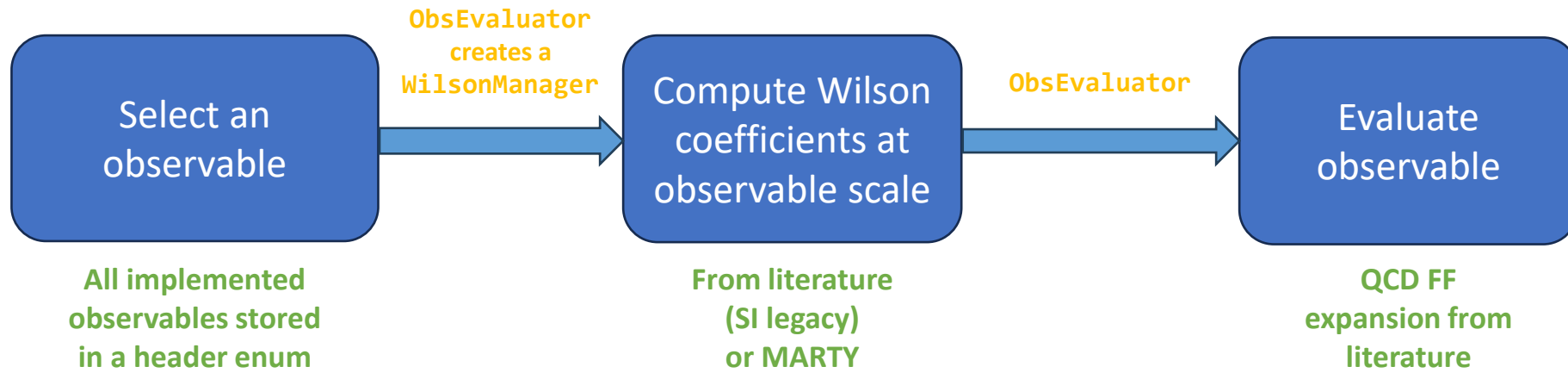
Save to .csv

ExternalIntegration (PART III)

```
16 DataFrame df = pd.read_csv("data.csv", options);
17 df.print();
18
19 df.head();
20
21 df.describe();
22
23 df.to_csv("output.csv");
24 std::cout << df.columns << std::endl;;
25 std::cout << df.index << std::endl;
26
27
28 std::cout << df.shape << std::endl;
29
30
31 return 0;
```



Observable calculation



Future goals

- Python user interface (for integration in notebooks and easier spread in the community)
- Handle generic likelihood distributions (for now only Gaussian)

The End

Questions ?