

Reverse Engineering Tool Requirements For Real Time Embedded Systems



Tools



?



*The right **tool** for the right **systems***

Tools

- ***System***
 - *Real time*
 - *Embedded*
 - *Developed in procedural paradigm*

Tools



?



The right **tool** for the right **purpose**

Tools

- ***Purpose***
 - *Modify software architecture*
 - *Ensure co-evolution*
 - *Update documentation*

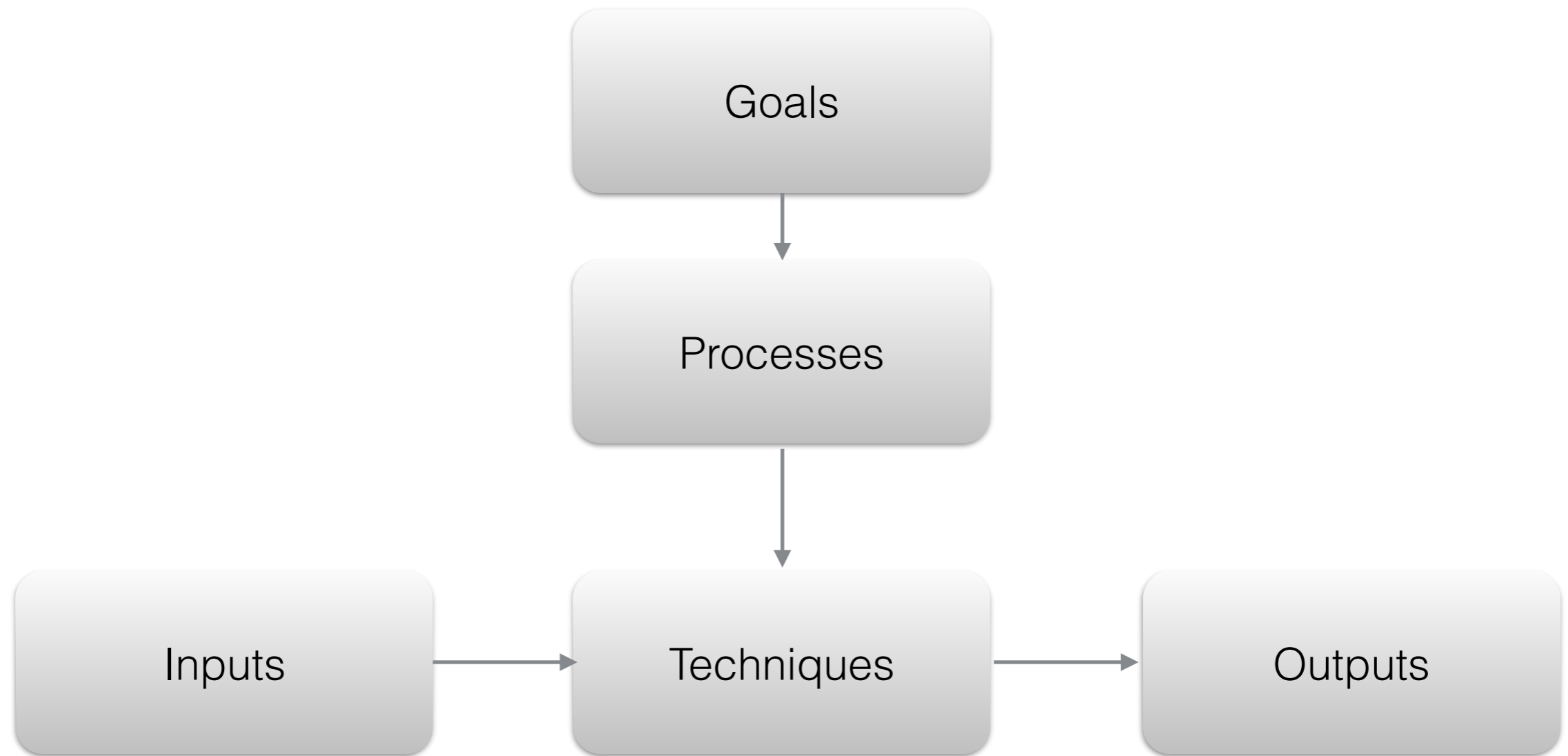
SAR LifeTime flow and defined RE features

Stéphane Ducasse and Damien Pollet

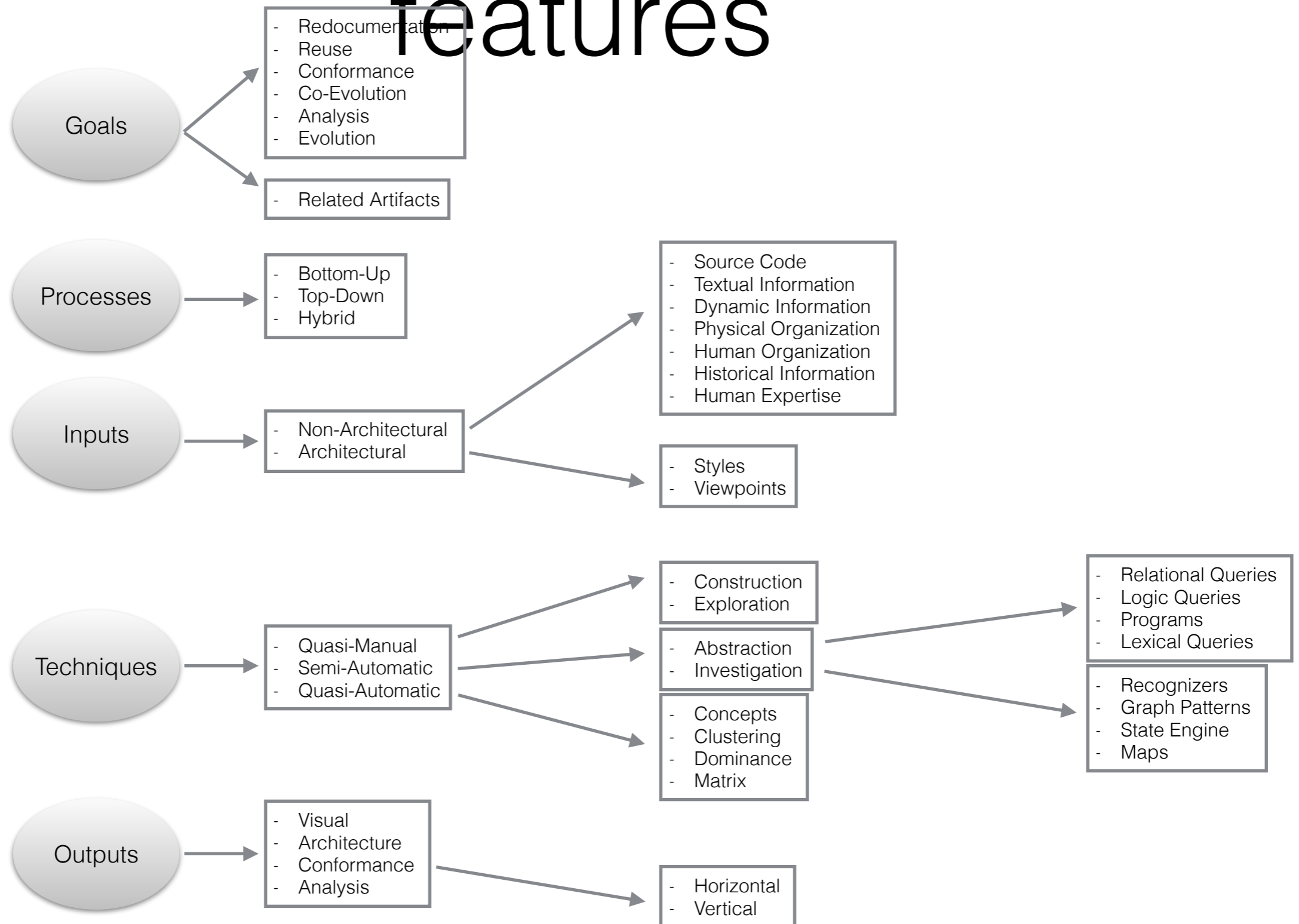
Software architecture reconstruction: A process-oriented
taxonomy

*Software Engineering, IEEE Transactions on, 35(4):573–591,
2009*

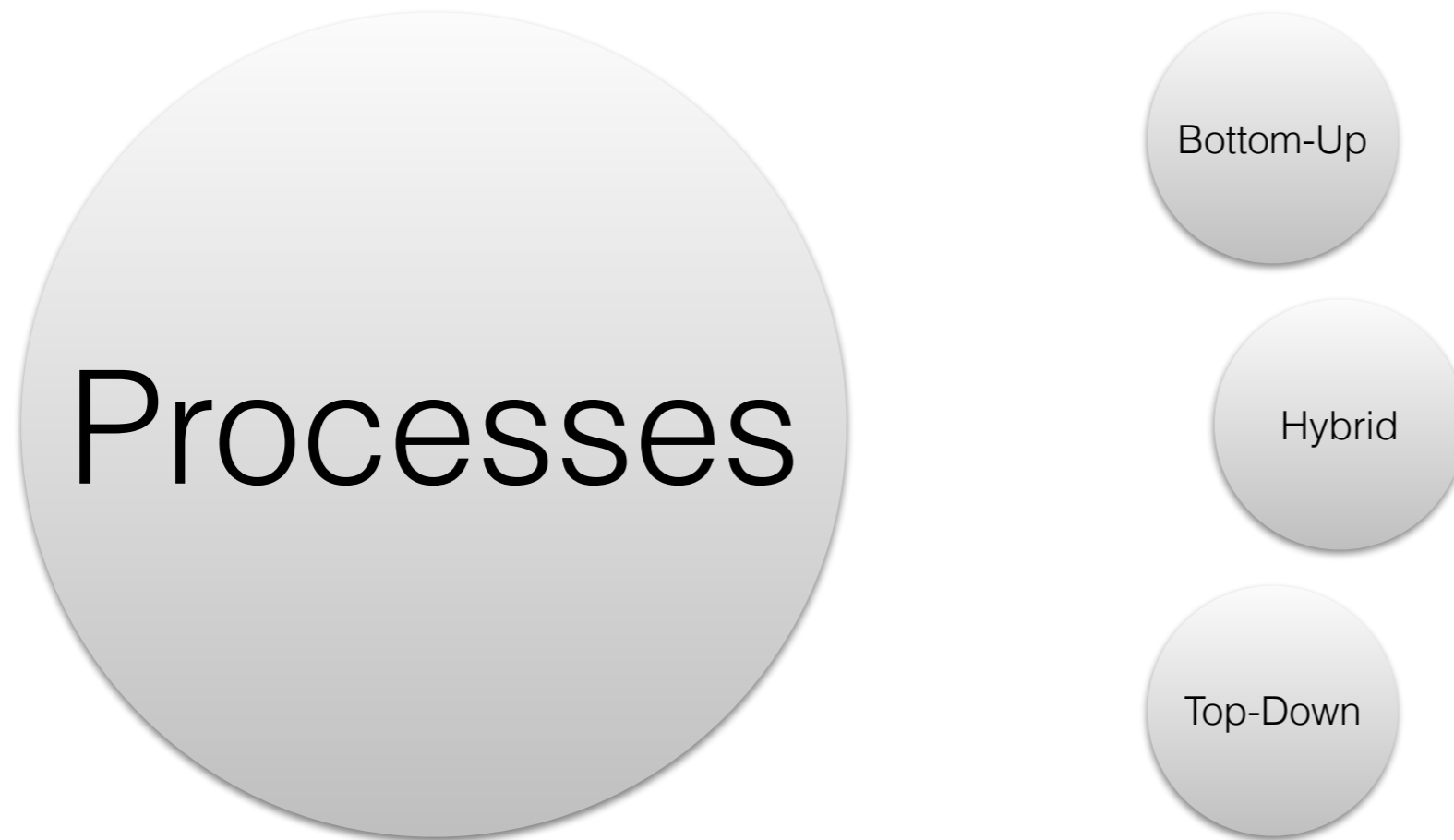
SAR LifeTime flow



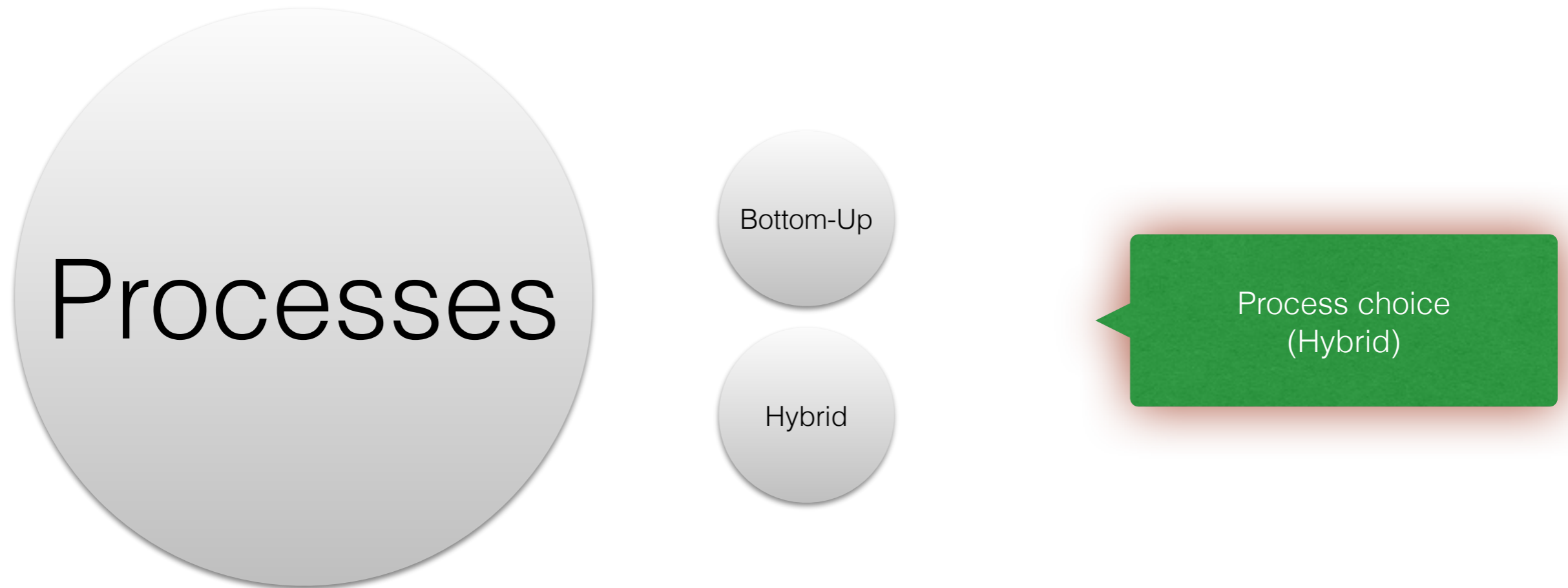
SAR and defined RE features



SAR LifeTime cycle and defined RE features



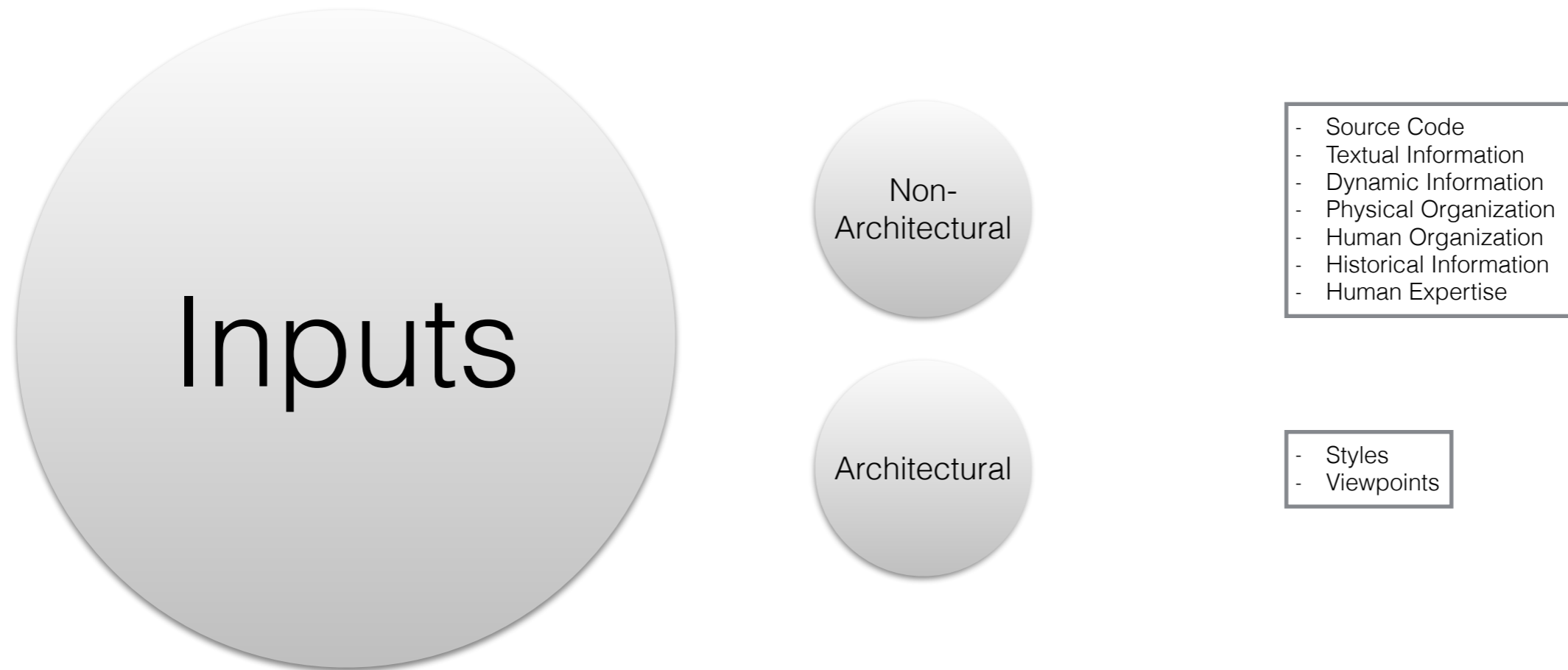
SAR LifeTime cycle and defined RE features



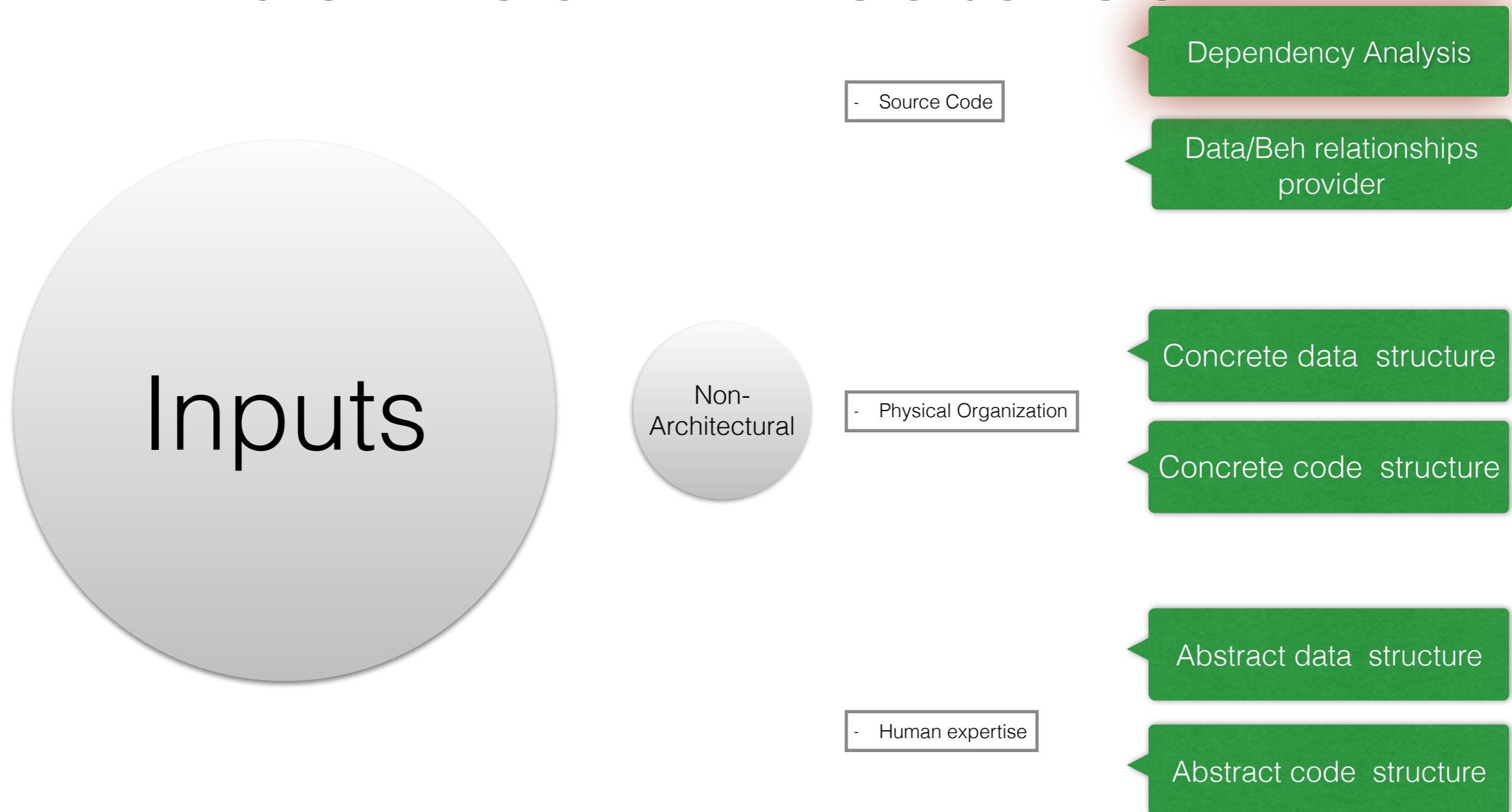
○ : SAR points

▭ : features

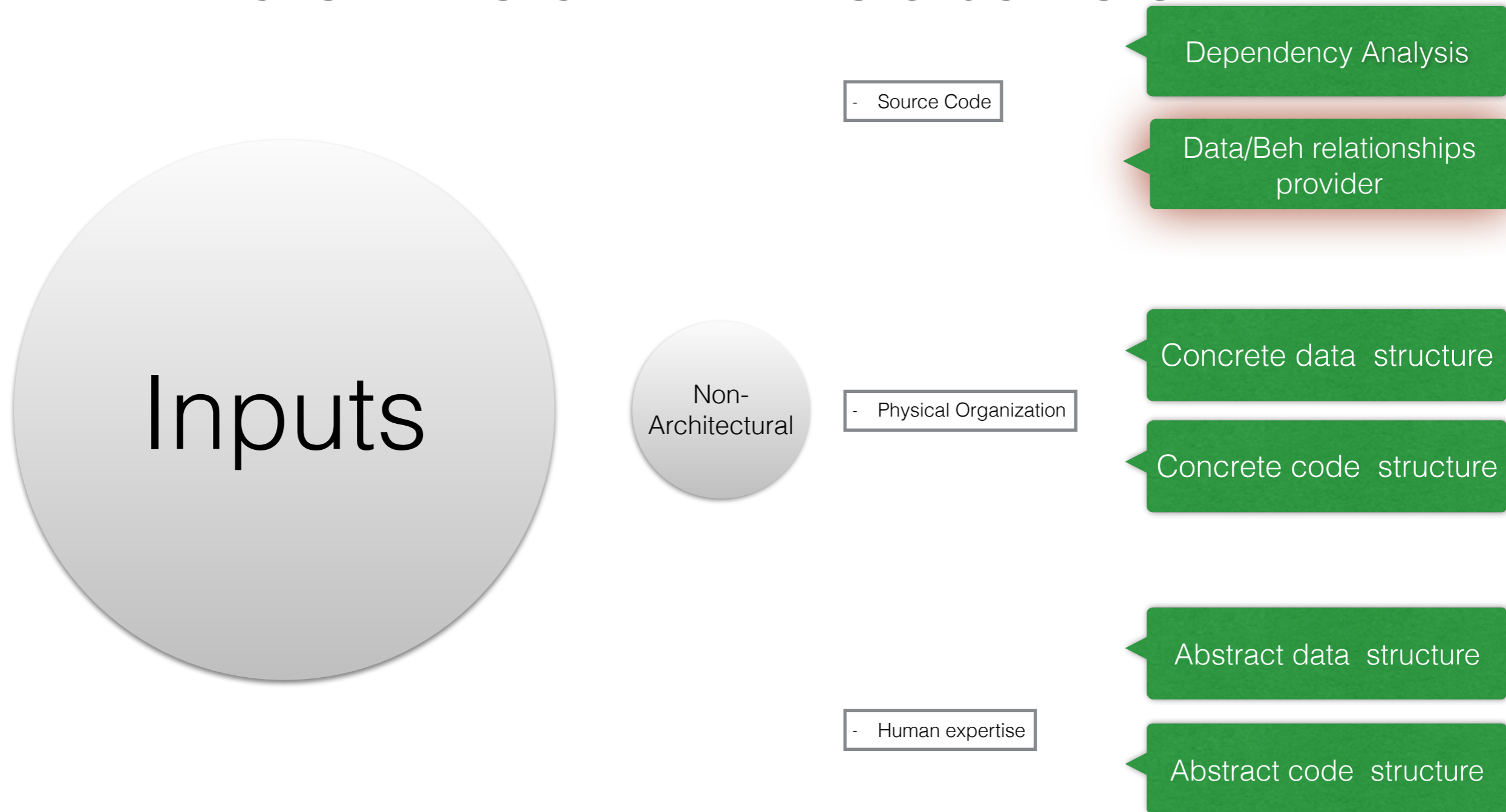
SAR LifeTime cycle and defined RE features



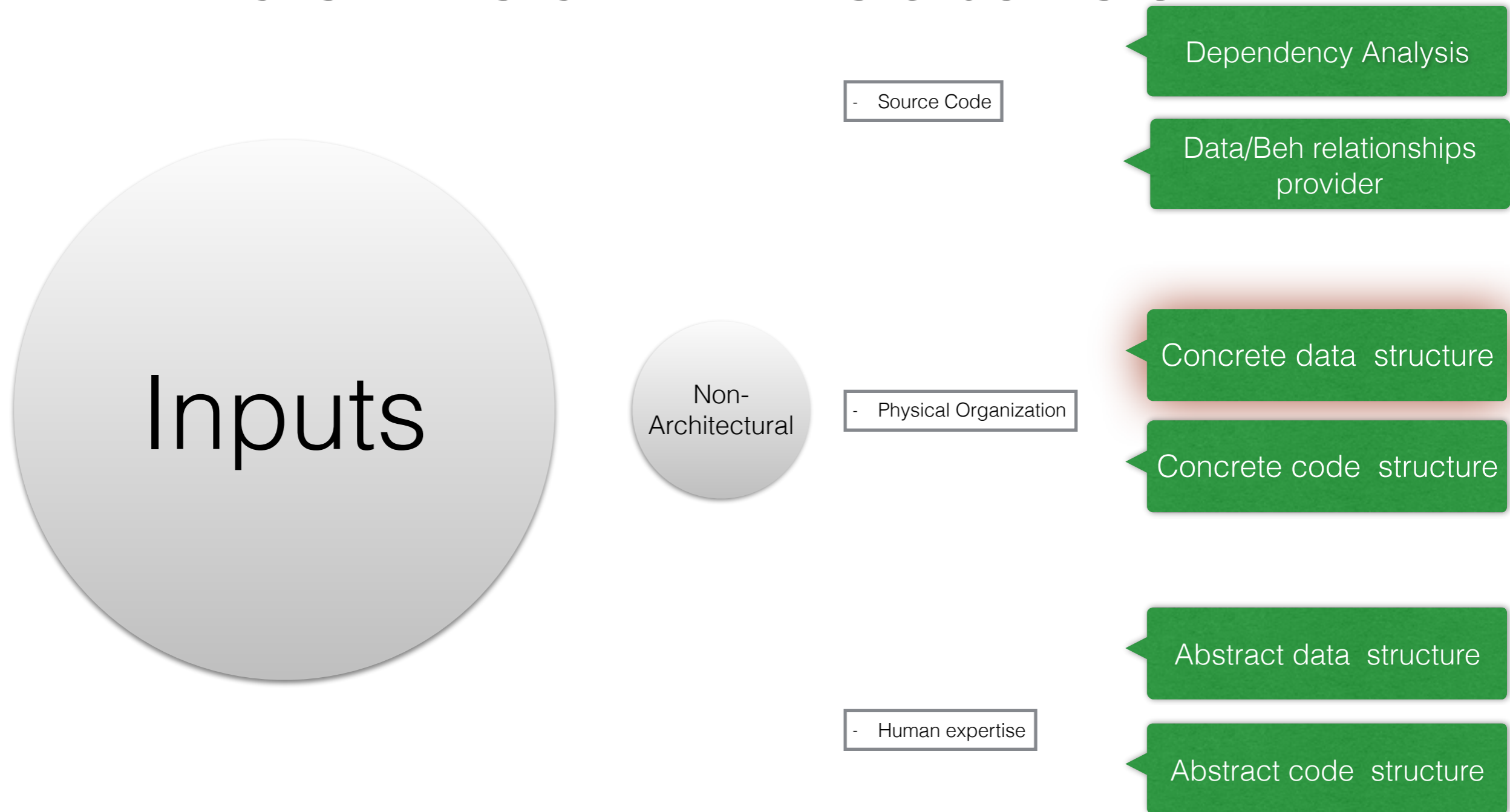
SAR LifeTime cycle and defined RE features



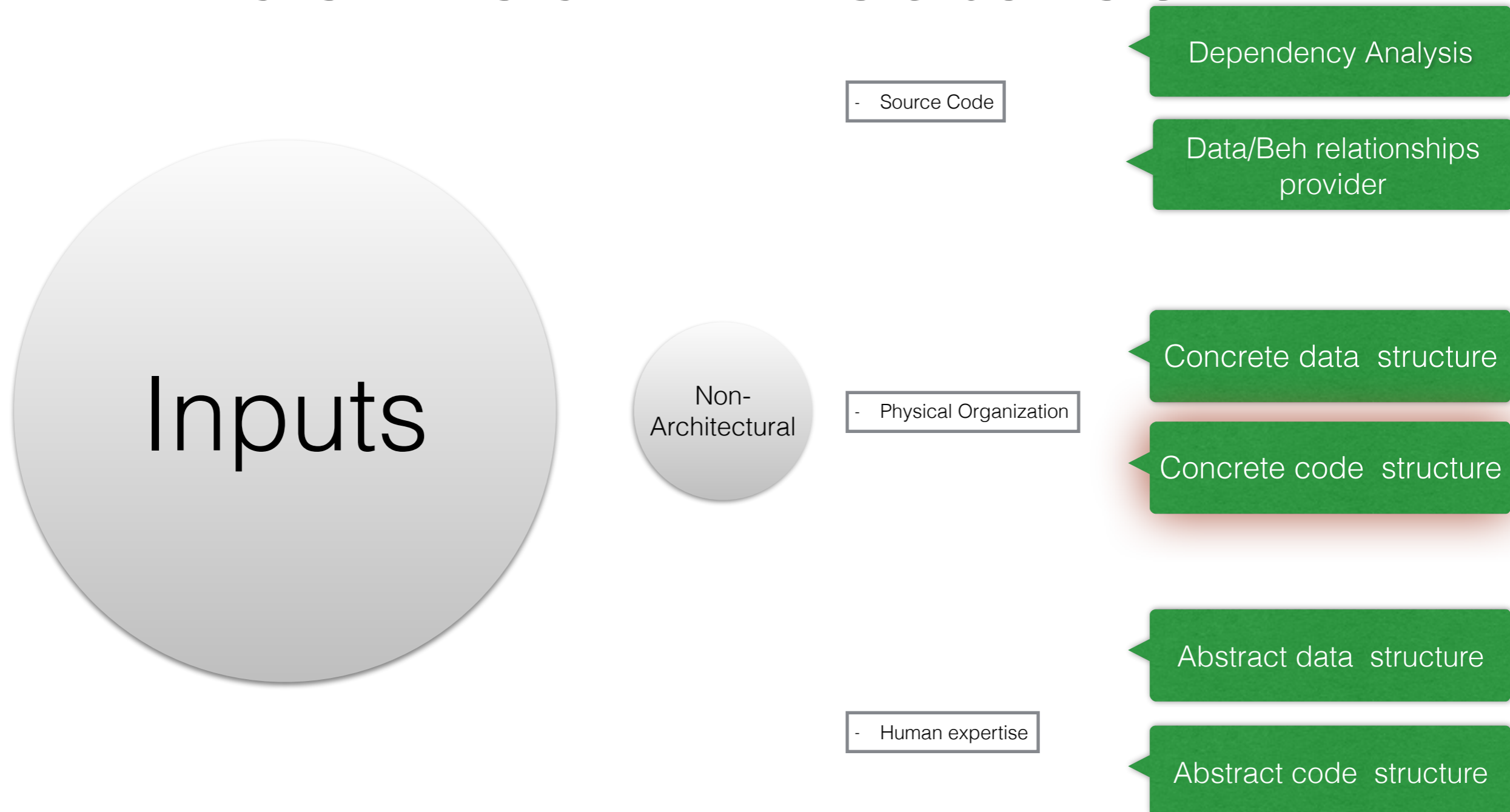
SAR LifeTime cycle and defined RE features



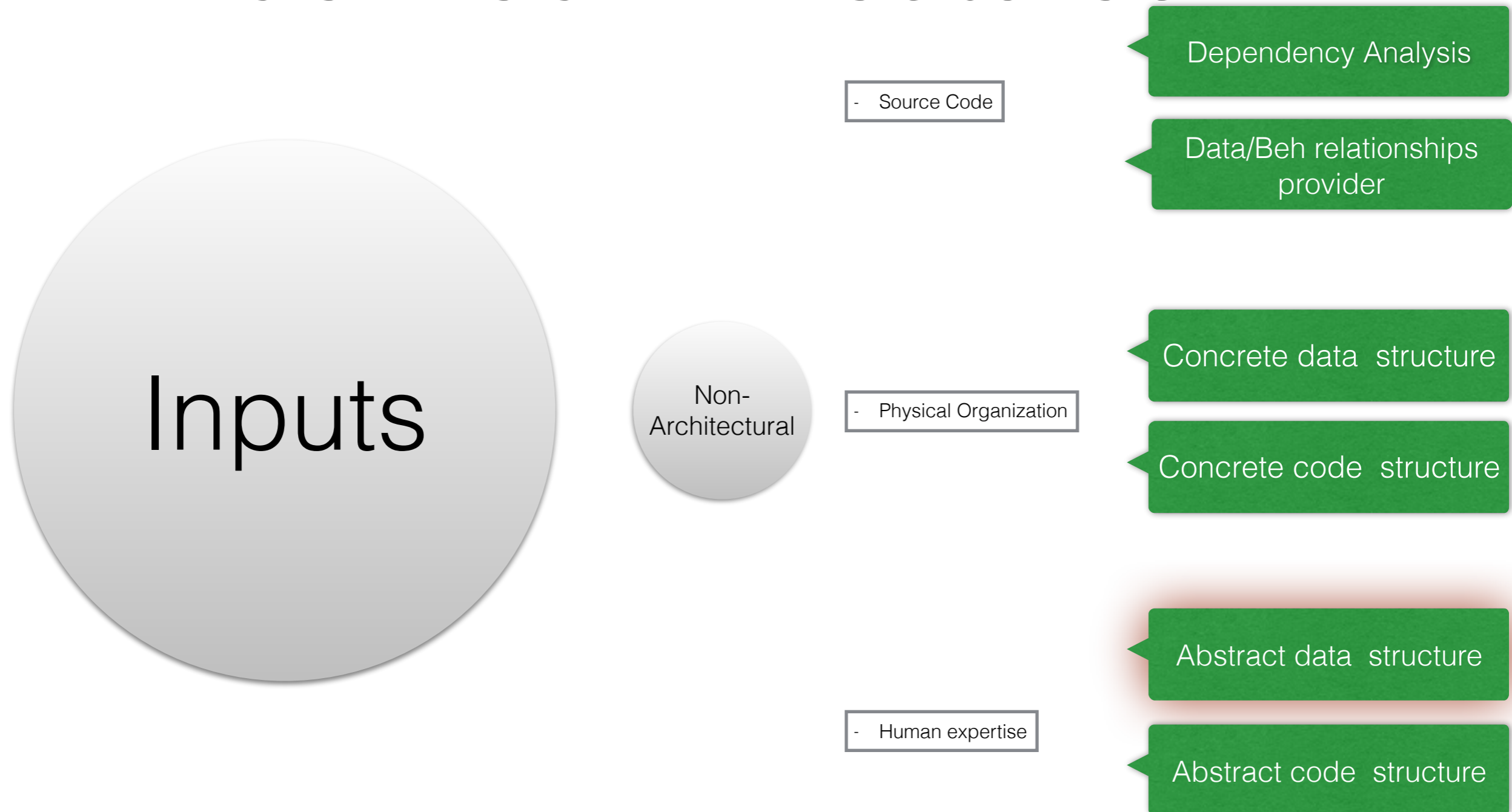
SAR LifeTime cycle and defined RE features



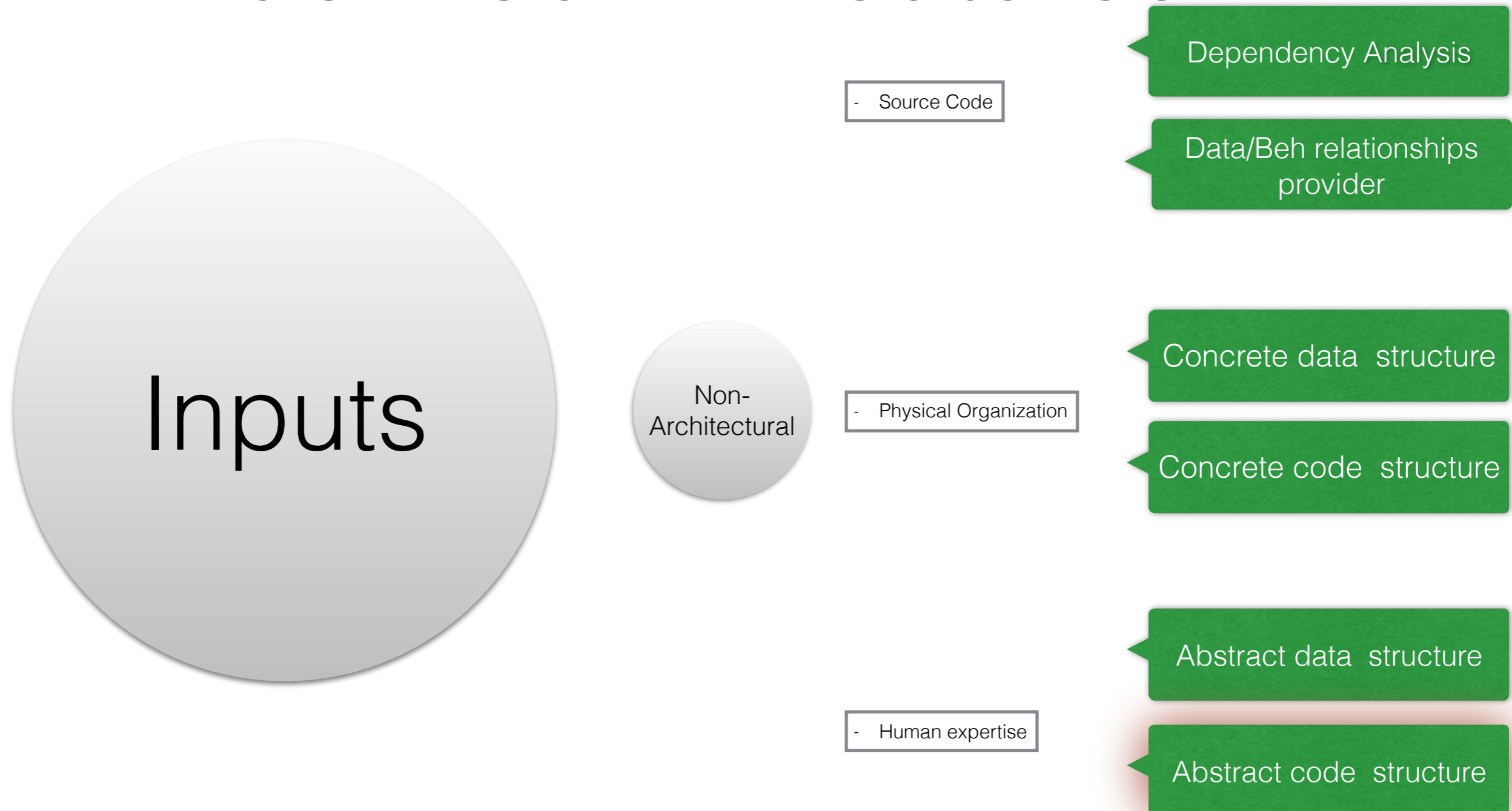
SAR LifeTime cycle and defined RE features



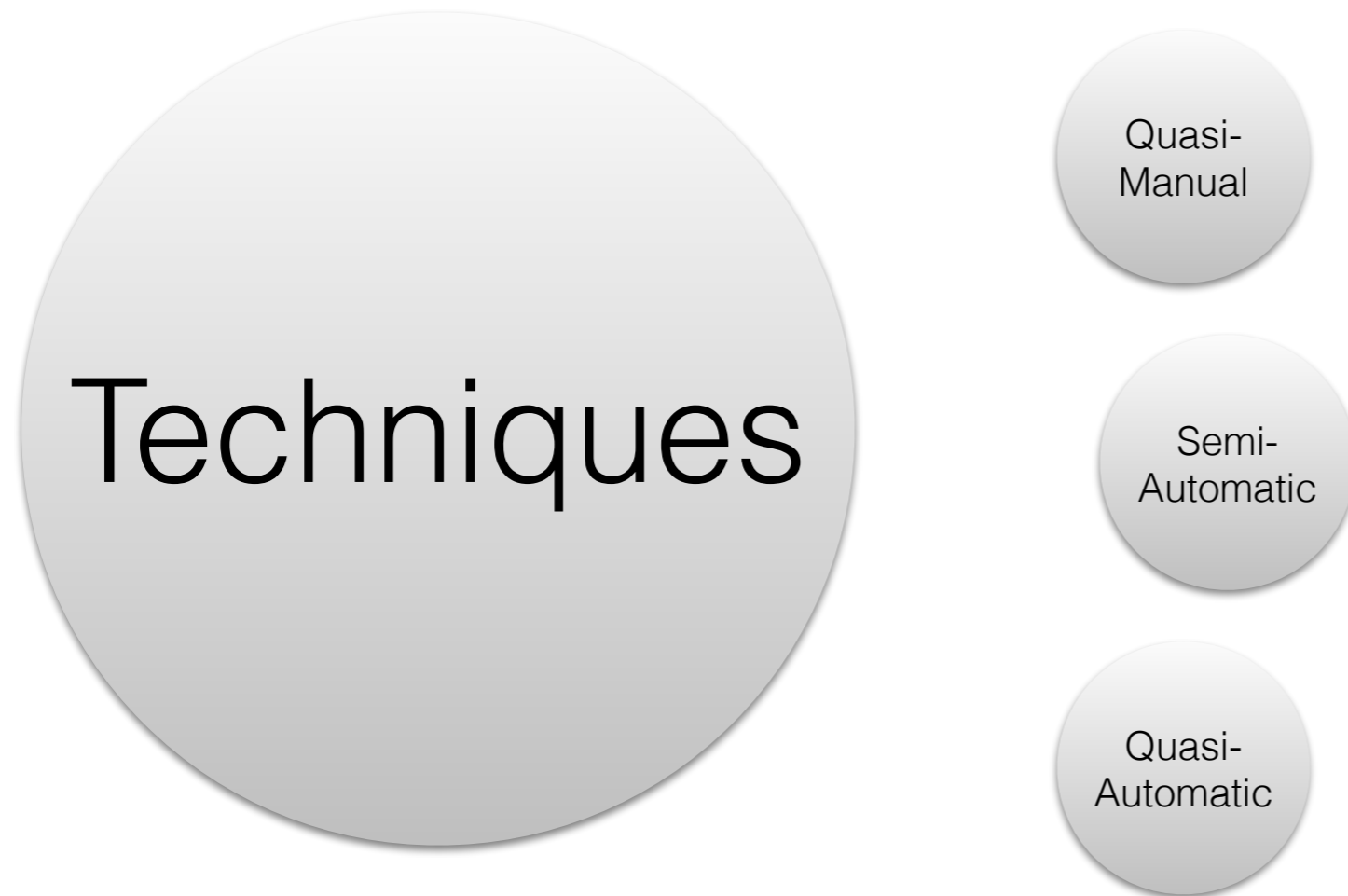
SAR LifeTime cycle and defined RE features



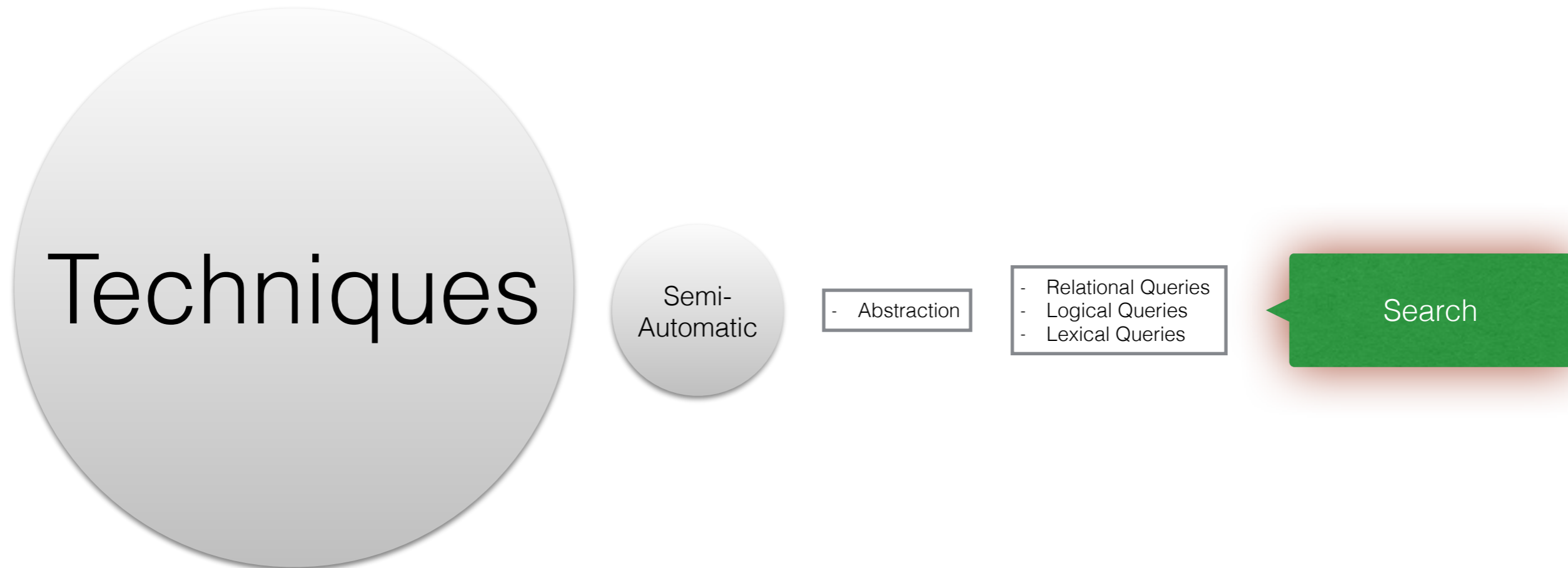
SAR LifeTime cycle and defined RE features



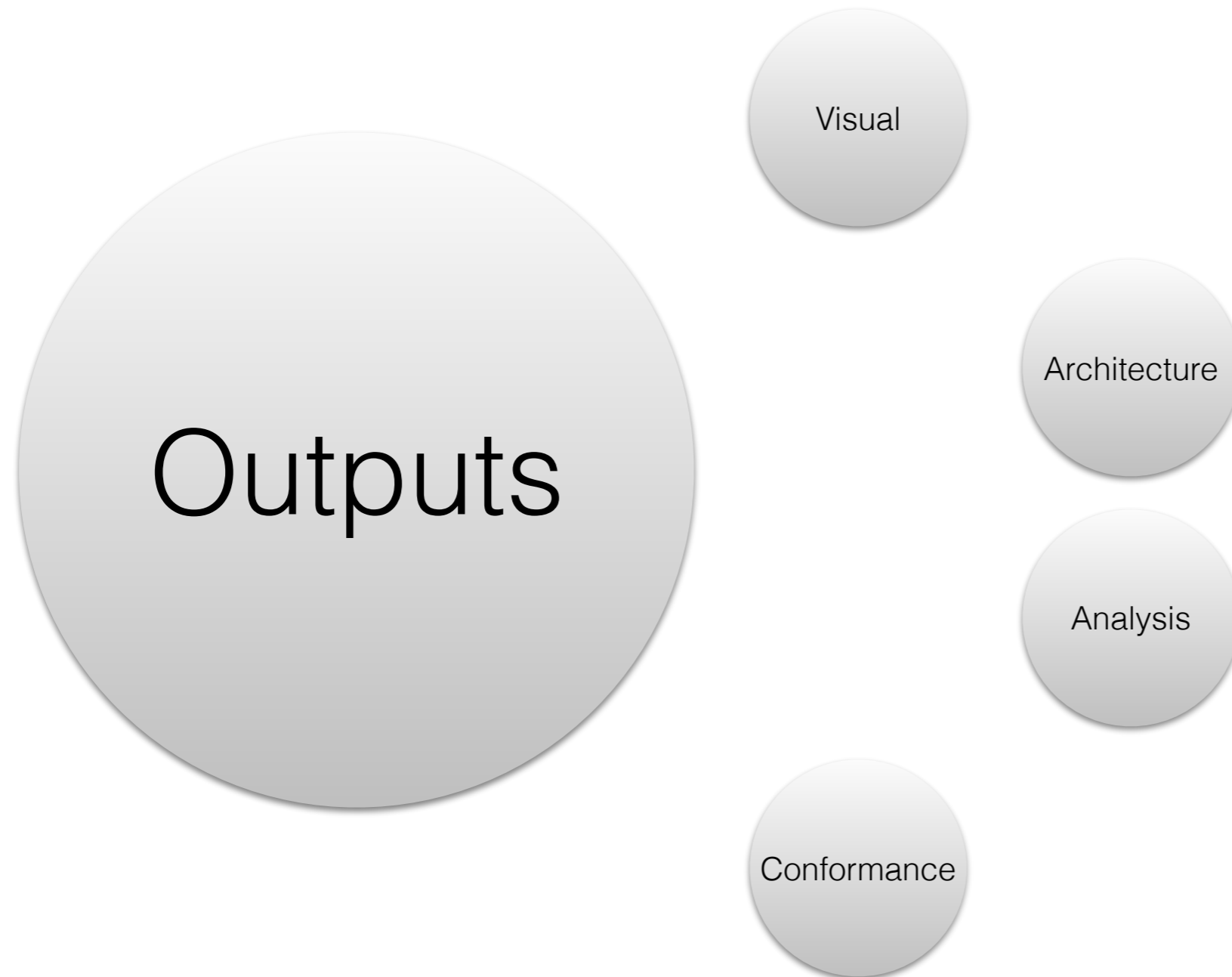
SAR LifeTime cycle and defined RE features



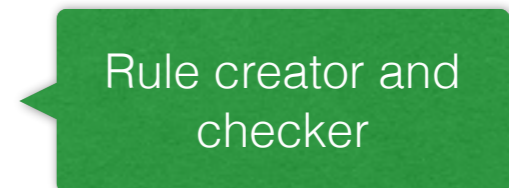
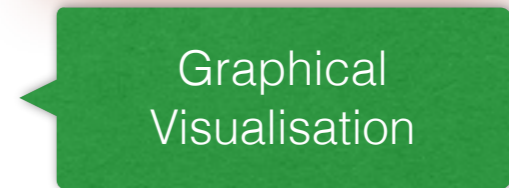
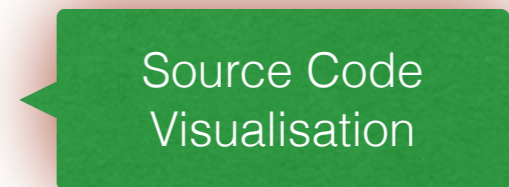
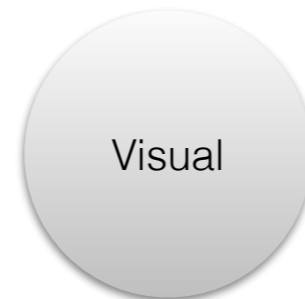
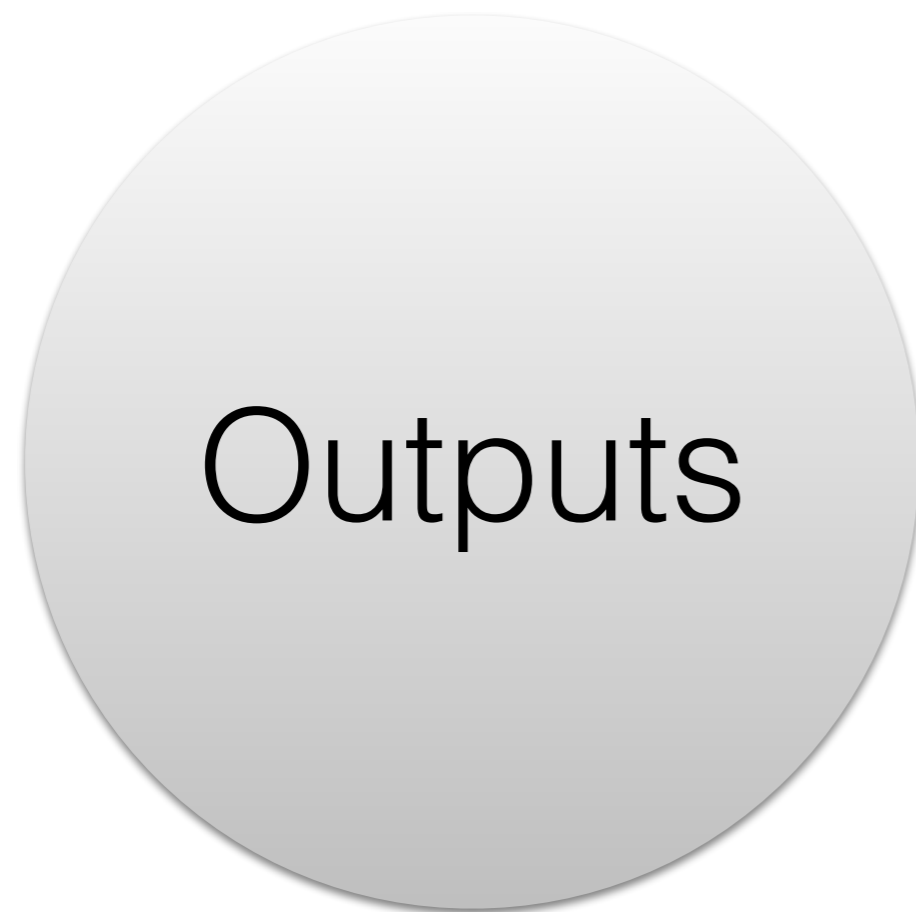
SAR LifeTime cycle and defined RE features



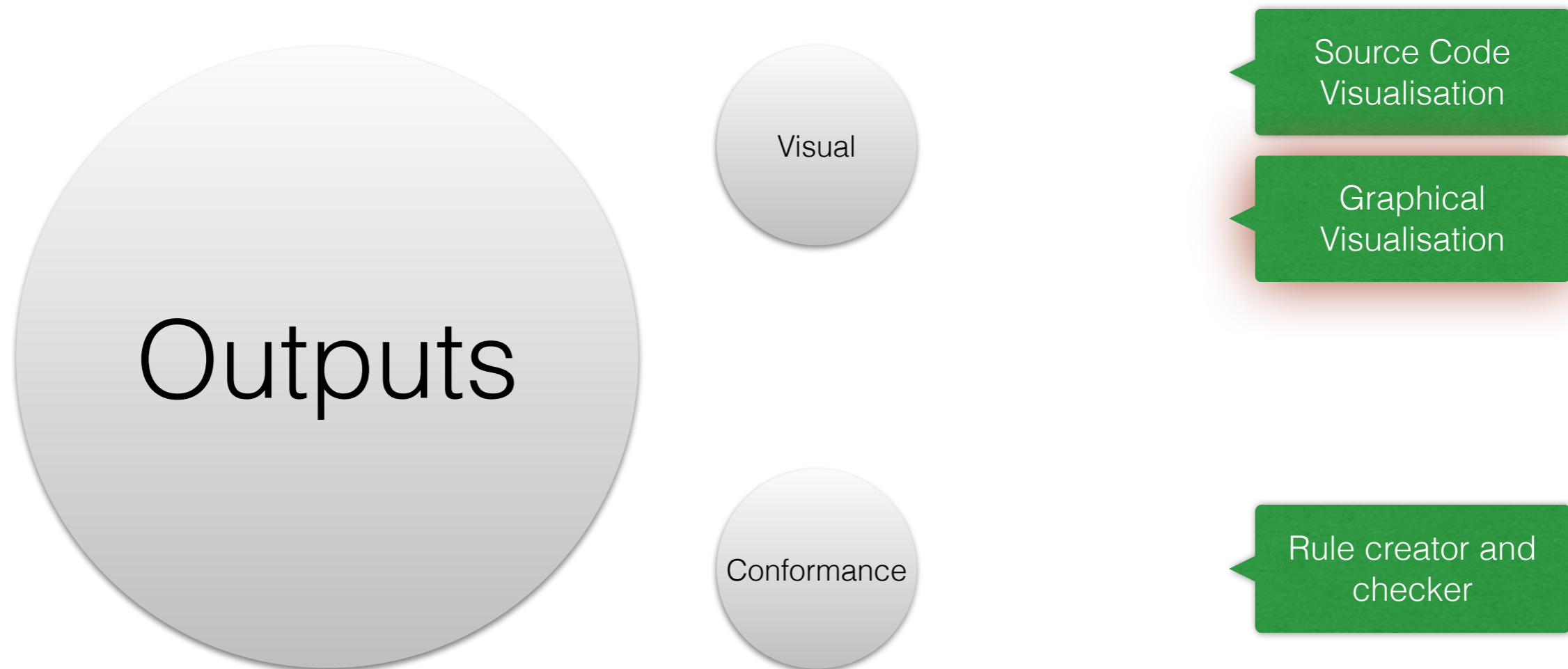
SAR LifeTime cycle and defined RE features



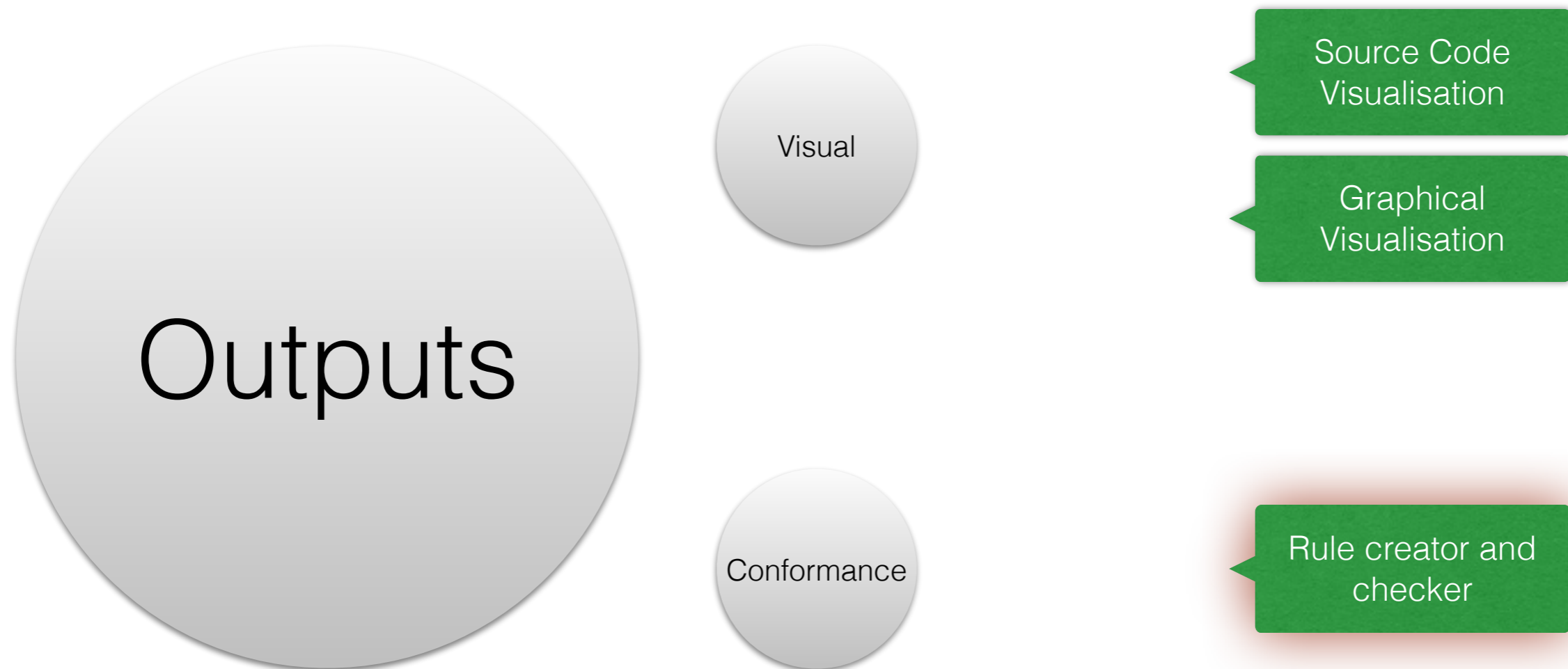
SAR LifeTime cycle and defined RE features



SAR LifeTime cycle and defined RE features



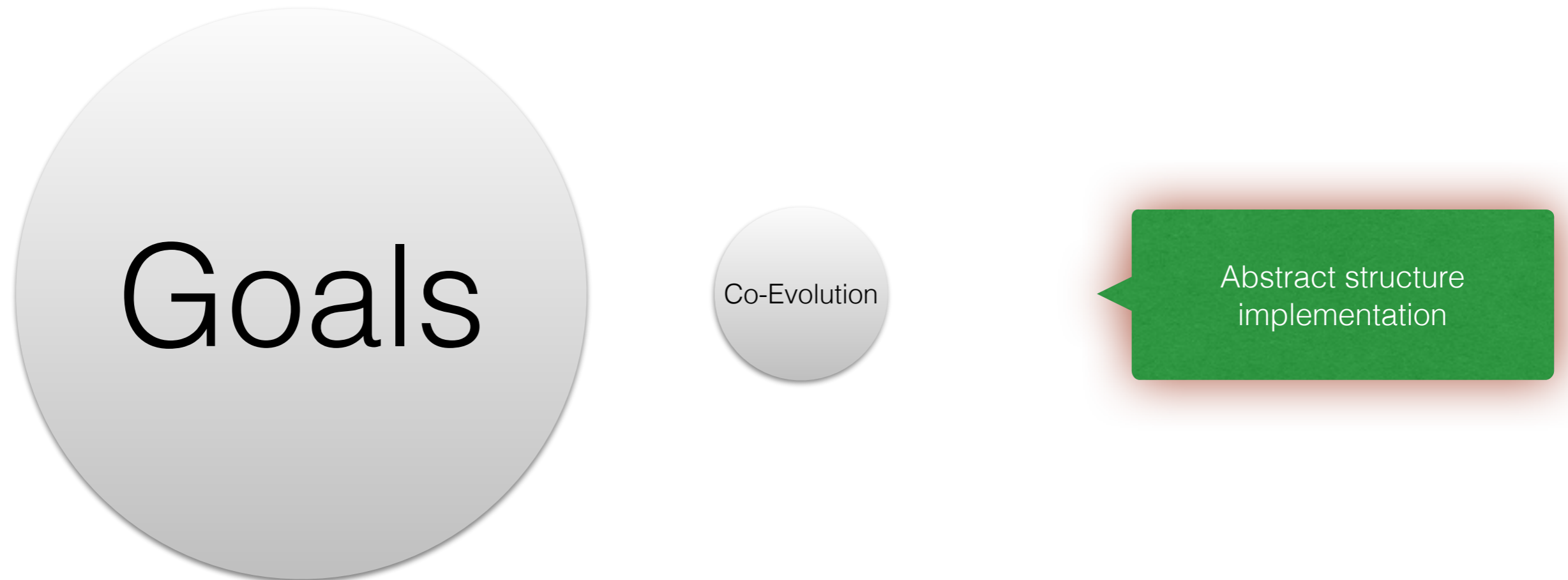
SAR LifeTime cycle and defined RE features



SAR LifeTime cycle and defined RE features



SAR LifeTime cycle and defined RE features

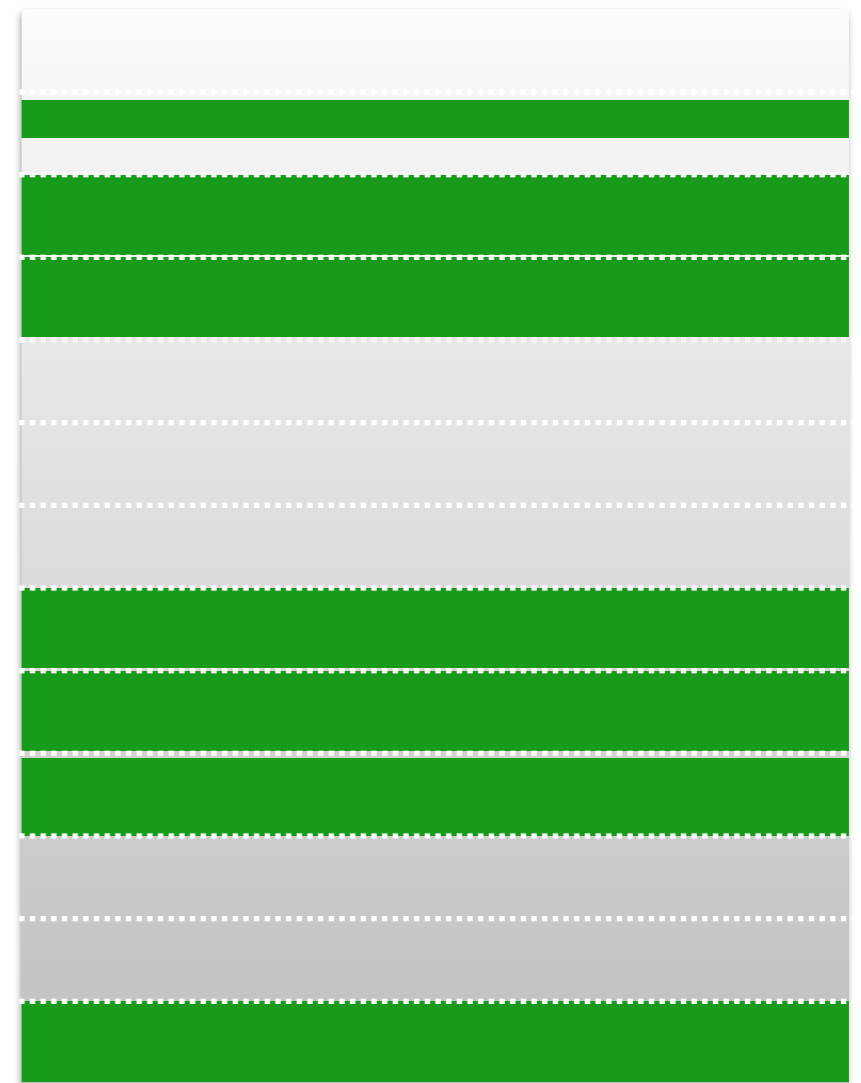
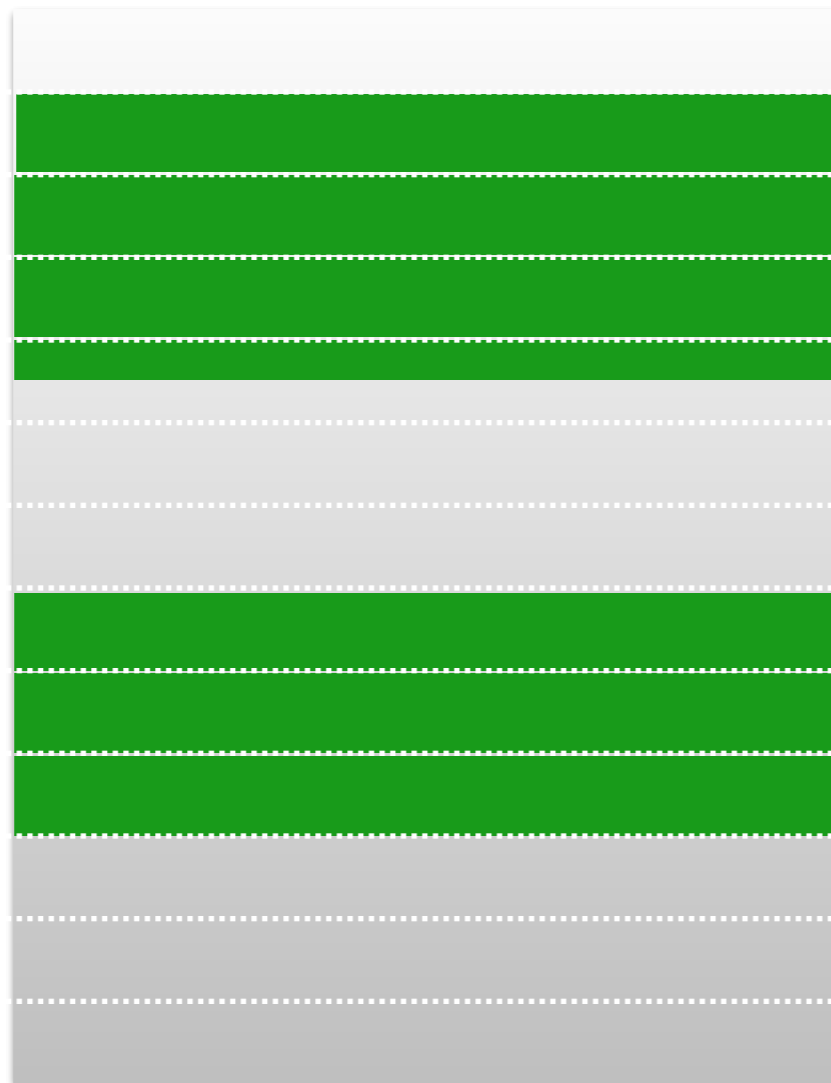


RE Tools and defined features

Understand

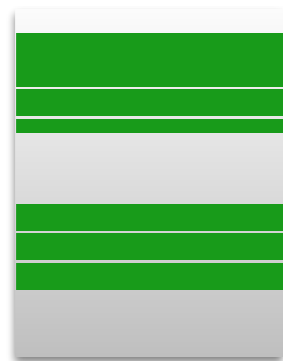
Moose

- Process choice
- Source Code Visu.
- Graphical Visu.
- Concrete Code Struct.
- Concrete Data Struct.
- Abstract Code Struct.
- Abstract Data Struct.
- Dependency Analysis
- Data/Beh. Relat. Prov.
- Search
- Rule Creator/Checker
- Abstract Struct. Impl.
- Open to user extension

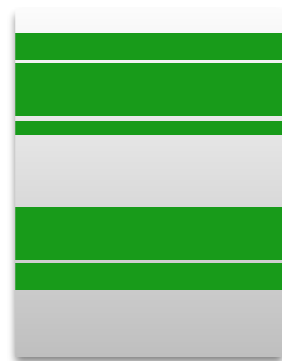


RE Tools and defined features

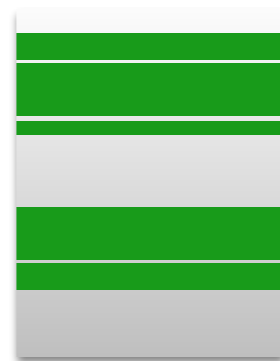
Obeo
Agility



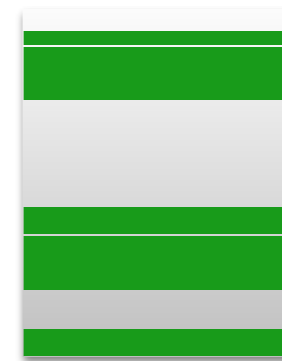
Code
Case



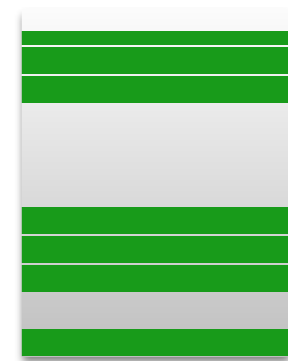
Understand



Moose



Rigi



: defined Feature

Questions

