**ReFFlow & WS-Flows:**
- Methodology, based on Web Service Flow (WS-flow) life-cycle
  - Each phase prescribes an approach addressing different aspects of a process definition
  - Promotes the creation of unified WS-flows meta-model with built-in adaptability
  - Fosters automation of WS-flows development using templates

**Process template modeling and assembly**
- Model and assemble templates and parameterized processes
- Use meta-model constructs
- Produce abstract process definitions
  - Avoid any references to WS instances and to WSs portTypes
- Add additional business logic

**Process definition generation phase**
- Transform the templates and parameterized processes into executable process definitions
- Use meta-programming applications
  - Code generators, XML transformations

**Compile and pre-processing time**
- Optional
- Depend on the targeted definition language

**Deployment**
- Enrich WS-flow definitions with
  - Execution environment specific data
  - Details about the participating WSs

**Execution time**
- Process instances are created and executed

**Post-run time**
- Analyze the process progress and logic
- Use information gathered during run time
- Change process schema accordingly

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**ReFFlow Project**

**Build time**
- Development automation
- Based on common WS-flow model
- Reuse of process definitions
- WS-flow templates
  - Design patterns, domain-specific templates, coordination protocols roles

**Run time**
- Desired features:
  - Process adaptability and flexibility

**Model Constructs:**
- Dynamic selection and invocation of WS instances
- Dynamic changes of process schema
- WS types
- Process logic
- Selection policies
- QoS parameters
- Accommodate multiple implementation approaches
- Provide for WS-flow standardization and portability

**Tools**
- Make use of model repository and
- WS-flows templates
- Support coordination protocols
- Transform definitions into multiple languages

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**Platform**