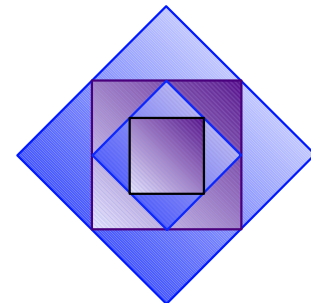


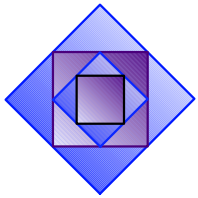
Model Based RAD

Netta M. Shani
Shiri Davidson

The Israeli Workshop on Programming Languages & Development Environments
July 2002

IBM Haifa Research Lab
Haifa Labs





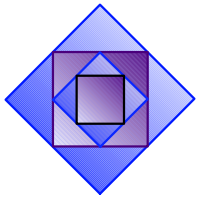
Model Based RAD

■ Model

- High level of abstraction
- Neutral (target, data domain)
- All application layers

■ RAD

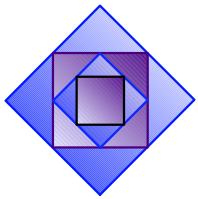
- Significant quantity of artifacts
- High quality artifacts
- End-to-end viable application



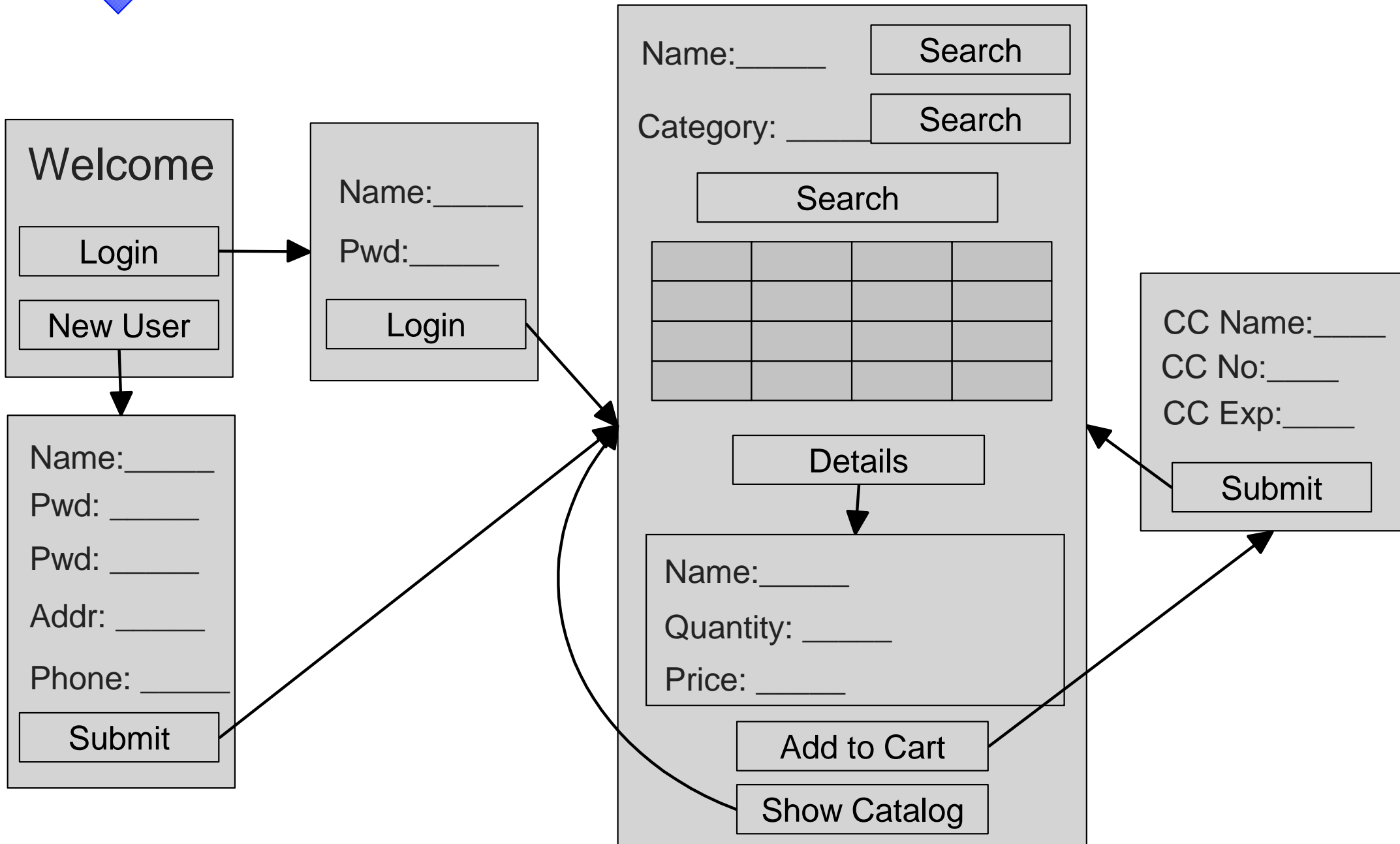
The Programming Model

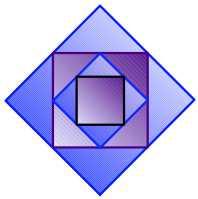
■ Defines all application layers

- User interactions
 - ▶ XForms compliant with additional, non-form related, structures
 - ▶ Abstract - platform neutral
 - ▶ Domain neutral
- Application flow
 - ▶ Rather a small part of the model
 - ▶ Flow structures
- Business logic
 - ▶ Limited and simplified procedural language
- Data sources
 - ▶ Propriety general purpose
 - ▶ Simple and basic
 - ▶ Core mapping to domain standard model (SQL, Java Beans)
 - ▶ Extensibility to additional domains

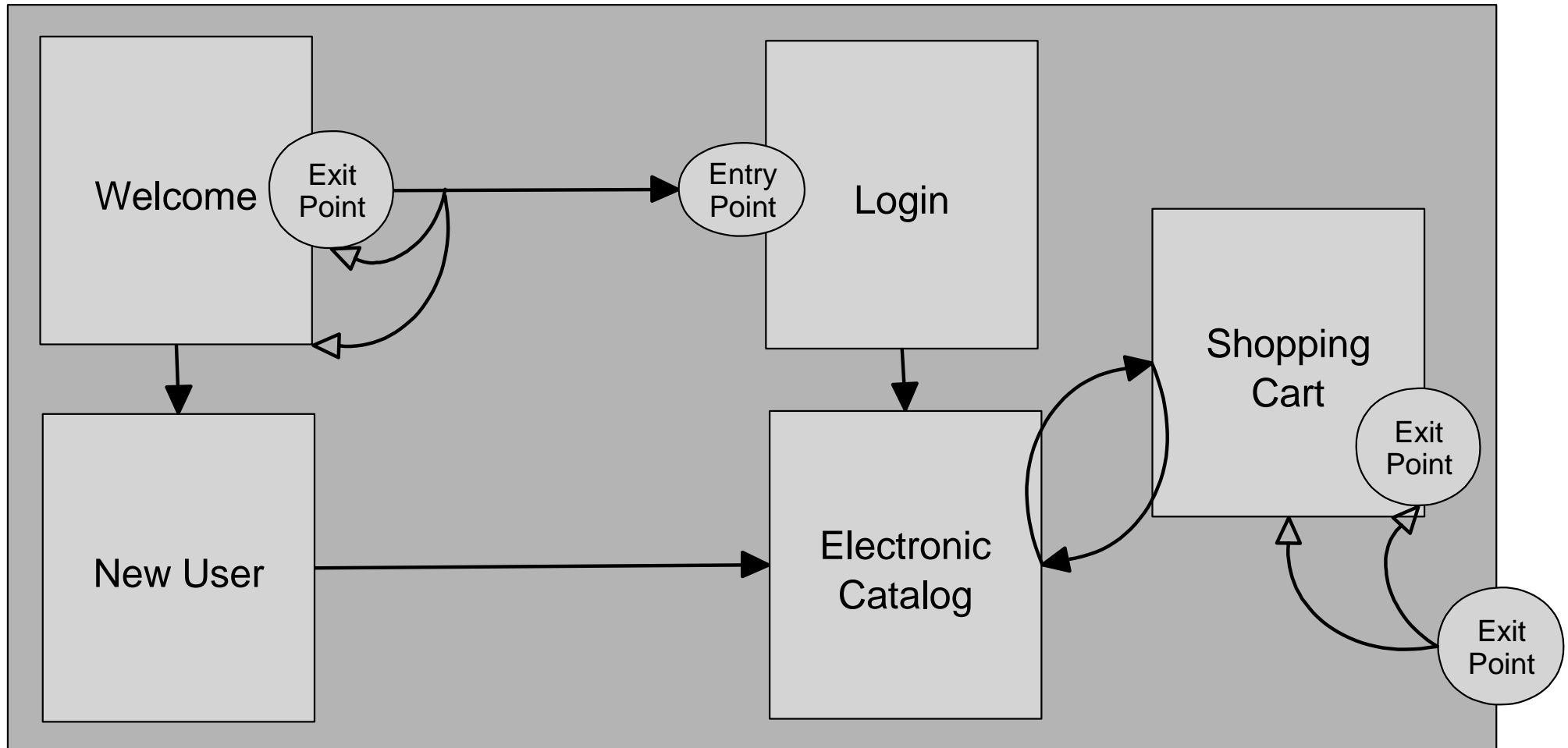


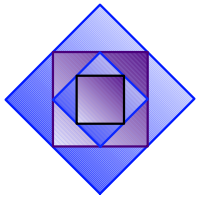
Example - shopping Cart



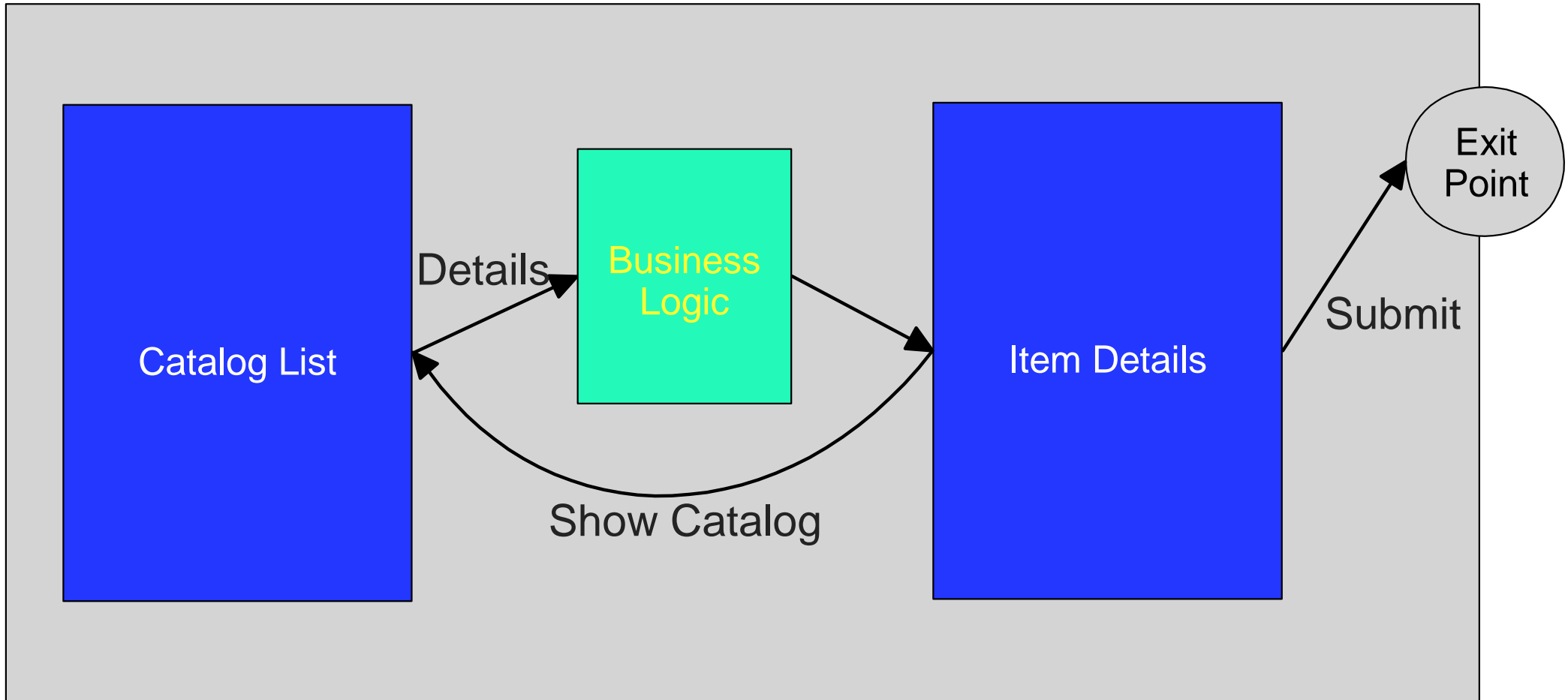


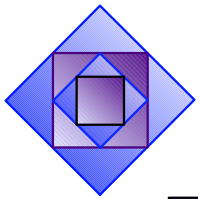
Components and Flow



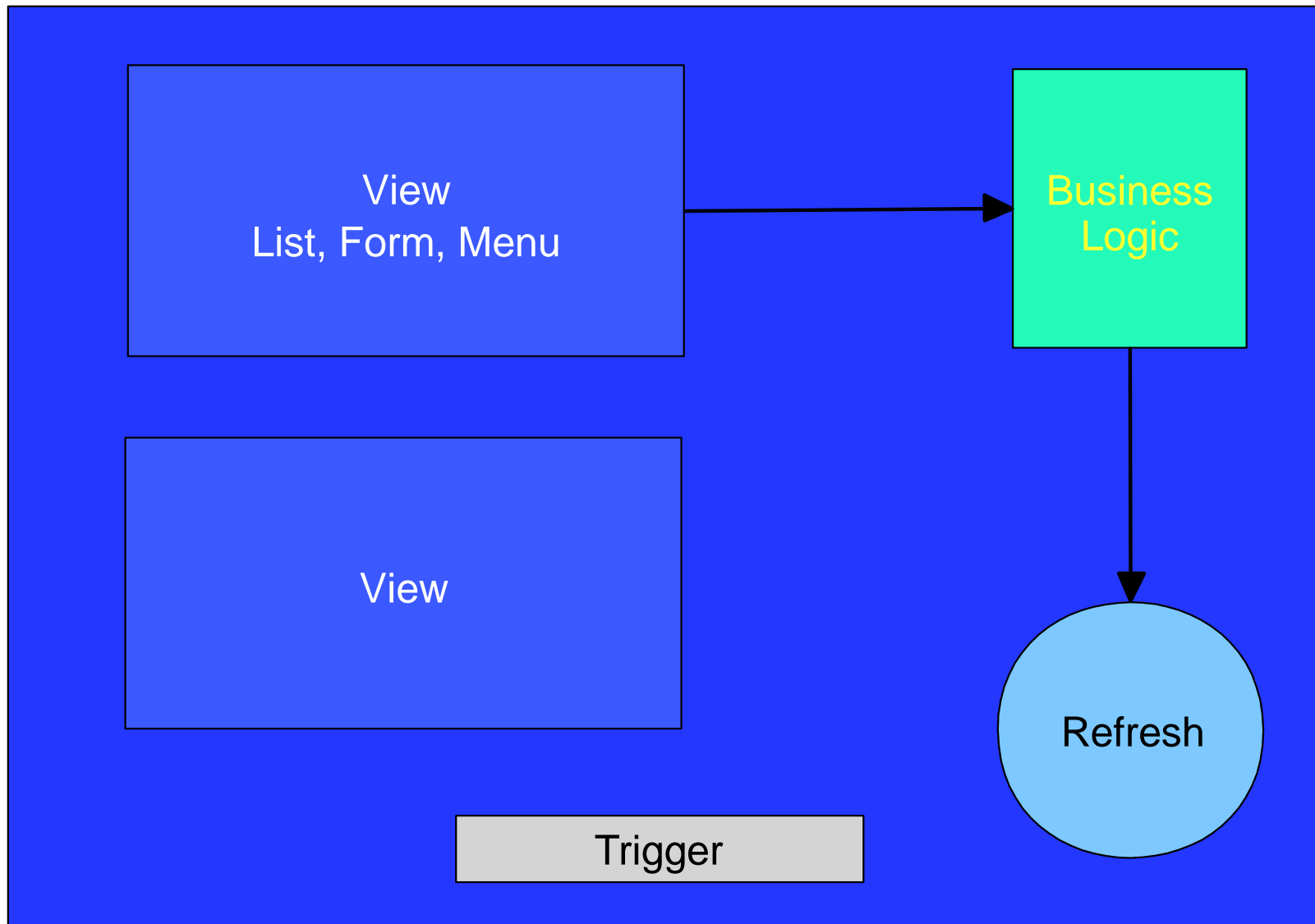


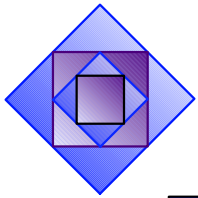
Component Internal Entities



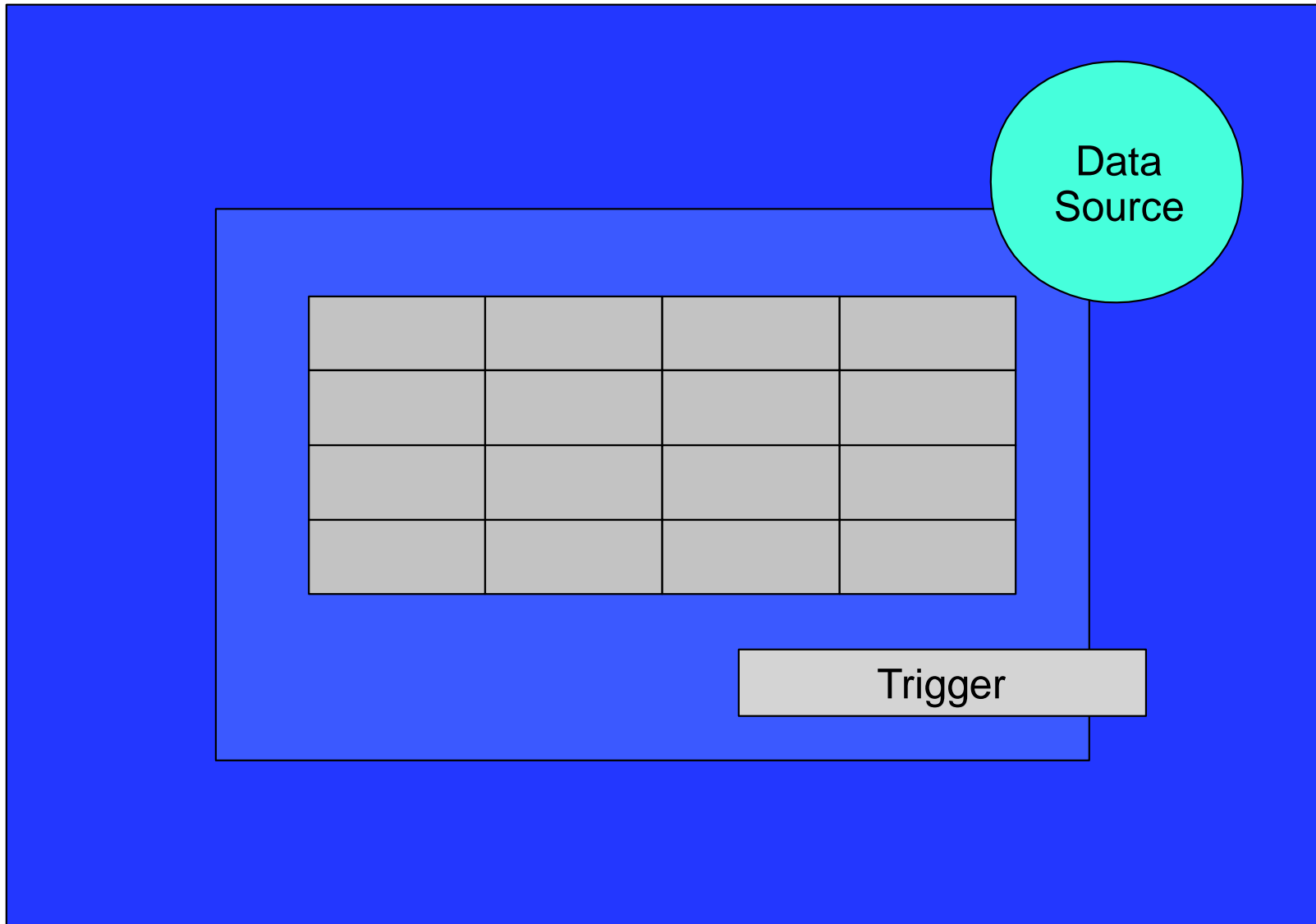


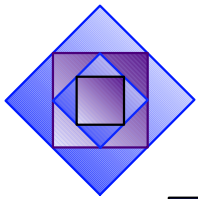
Interaction Unit



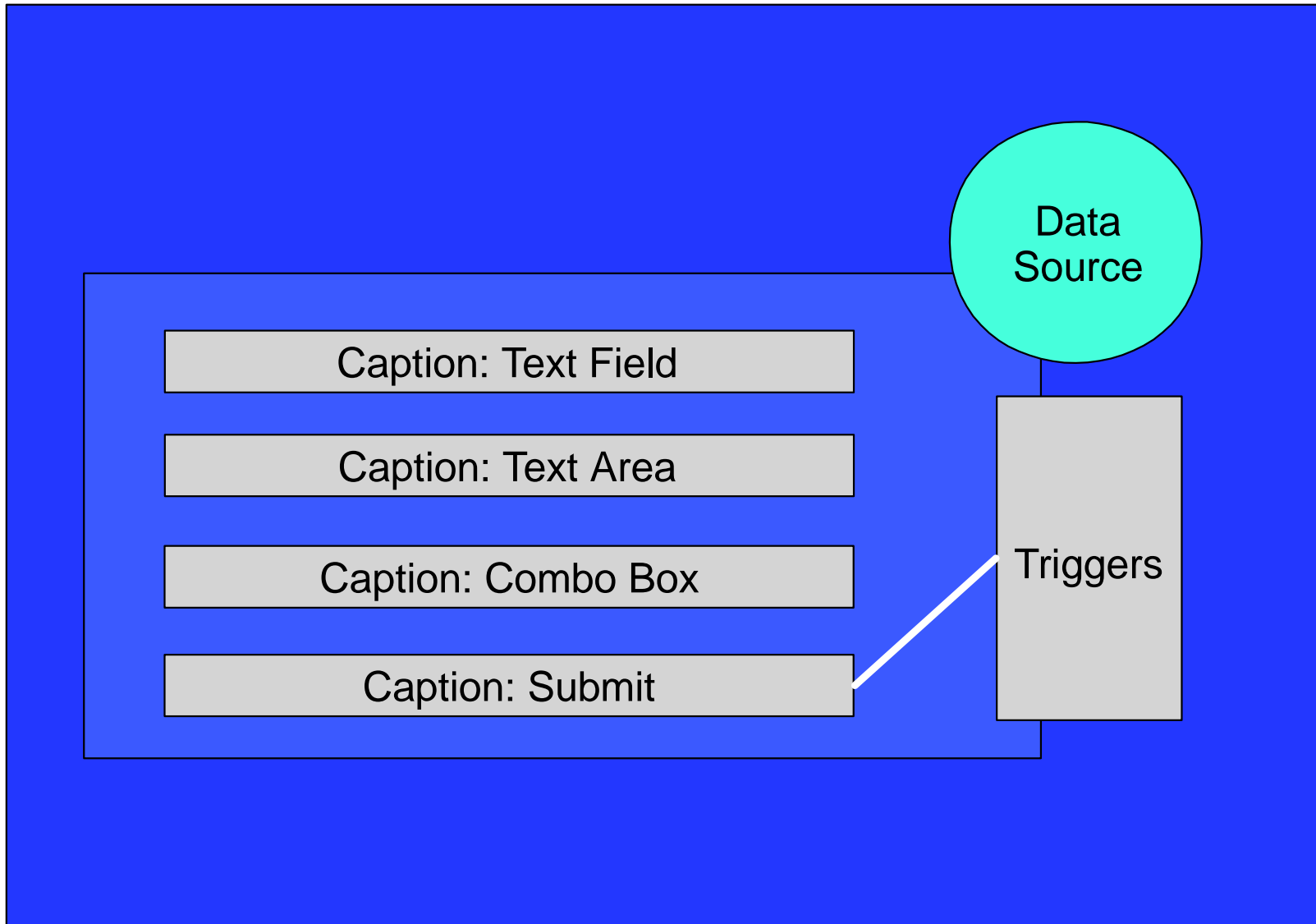


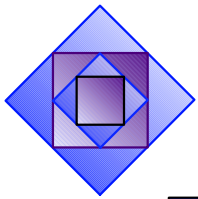
List View



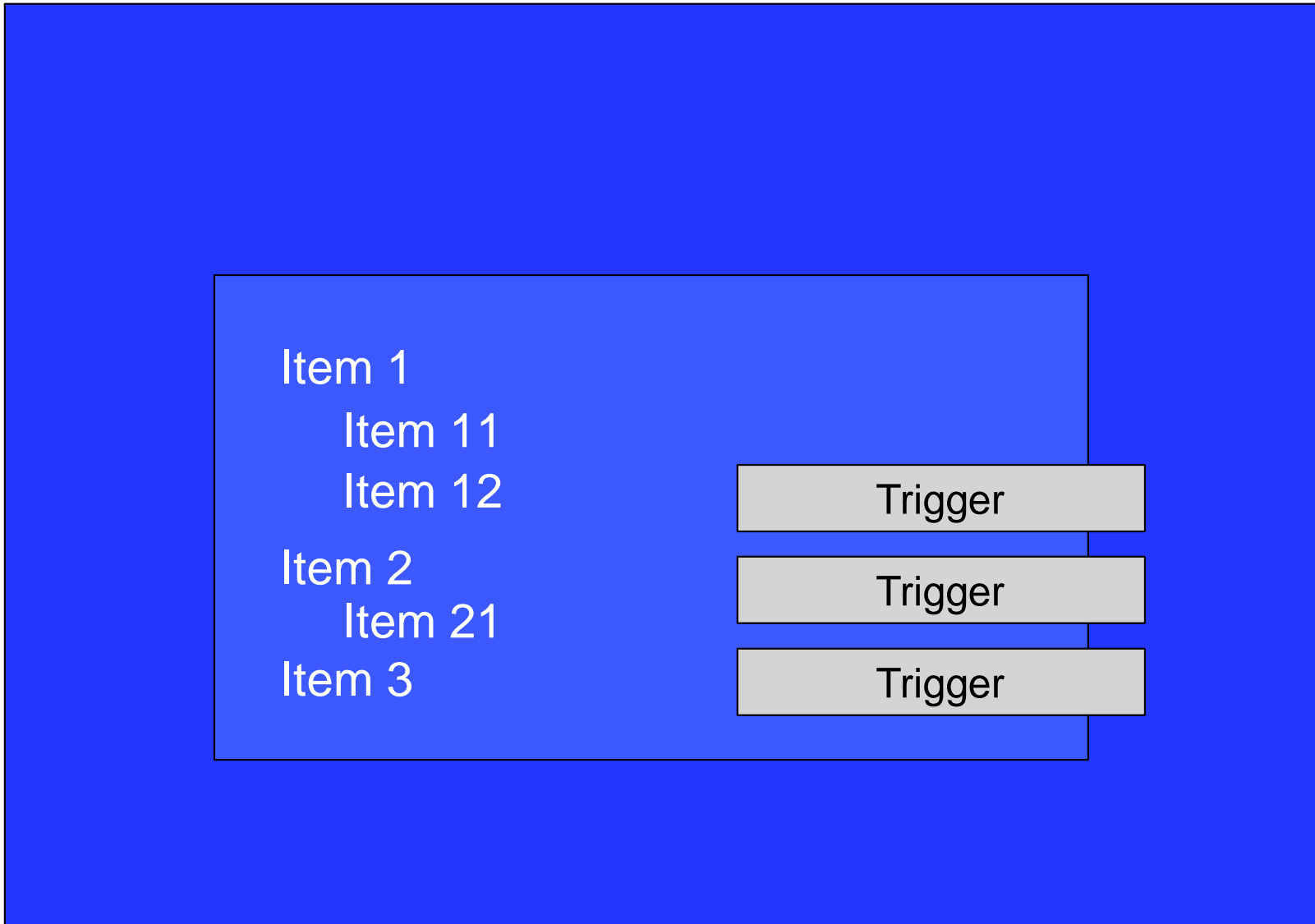


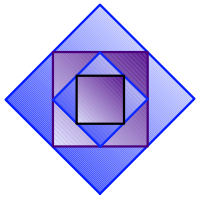
Form View





Menu View





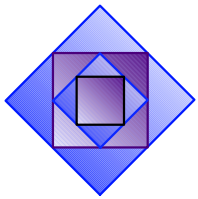
Business Logic Unit

■ Control Structures

- Iteration
- Condition

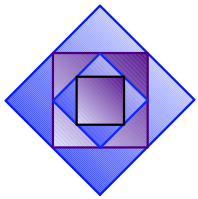
■ Actions

- Core
 - ▶ Set Variable
 - ▶ Set State
 - ▶ View Actions
 - Hide / Show
 - Enable / Disable
- Data
 - ▶ Defined by the Domain



Model Summary

- Complete description of all application layers
 - User interactions
 - ▶ Views
 - ▶ Triggers
 - Application flow
 - ▶ Connectors and Links
 - ▶ Flow Structures: Collection, Popup, Wizard
 - Business logic
 - ▶ Actions
 - ▶ Control Structures: Iteration, Condition
 - Data sources consumption (future: creation)
 - ▶ Data Sources
 - ▶ Fields (persistent, volatile)
 - ▶ Action Descriptors



RAD Tool

- **Productivity**
- **Lower expertise level**
- **Extensible domains**
 - Data
 - Runtime
 - Tool
- **Generated application**
 - Significant quantity (end-to-end)
 - High quality

