An open architecture for the creation of intelligent systems for synthesis tasks (such as planning, design and configuration) based on the handling of "issues" and the management or maintenance of the constraints describing the product of the process.

1. **Representation** - a core notion of a synthesis process and the product(s) of such processes as a set of nodes making up the process or product, along with constraints on the relationship between those nodes, a set of outstanding issues, and annotations related to these - `<I-N-C-A>` - Issues, Nodes, Constraints and Annotations.

2. **Reasoning** - the provision of reusable reasoning and constraint or model management capabilities.

3. **User Interfaces** - to understand user roles in performing collaborative activities and to provide generic modules which present the state of the processes they are engaged in, their relationships to others and the status of the artefacts/products they are working with.

4. **Applications** - work in various application sectors which will seek to create generic approaches (I-Tools) for the various types of Task in which users may engage.

[http://www.aiai.ed.ac.uk/project/ix/]