If we really want to build a Cognitive System...

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We need to face two steps:

1. Introduce a new methodology of **integration** of *existing* techniques for (low-level-control) percept-control-act
   with
   existing techniques for (high-level-control) percept-interpret-reason-learn-plan.

2. Apply the integration methodology to existing systems, or to build new systems, for testing **cognitivity**: how far the system can go in terms of adaptivity, reasoning and learning abilities ..

Principles of Integration:

1. Interdisciplinary competences, to cover specific needs, involved with the bridging tasks.

2. Unified (formal) Representation to thread from Control-System methodologies to Cognitive-System methodologies, and *viceversa.*

3. Uniform platforms and programming languages to deal with communication and the complexity of the flow of information.

Backgrounds and Competences required:

Artificial Intelligence, Cognitive Vision, Robotics, Vision, Cognitive Science, Human-Machine interaction. Academic and Industrial joined efforts to experiment the integration outcome.

Demonstrators:

1. A **Playing Room.** Should be able to adapt to the children needs and grow up with the children, learn from them and teach them.

2. A **Care Giver Room**, designed for people with specific cognitive inabilities. Designed for people leaving alone, in order to support them, monitoring and offering help in case of need, and alerting human caregivers in case of danger.

3. **Surveillance of public areas**, designed for wide spaces like airports, rail stations, entrance of stadium, theaters, cinemas etc.. This system monitors and studies human behaviours in order to anticipate possible dangerous actions and alert investigators.