

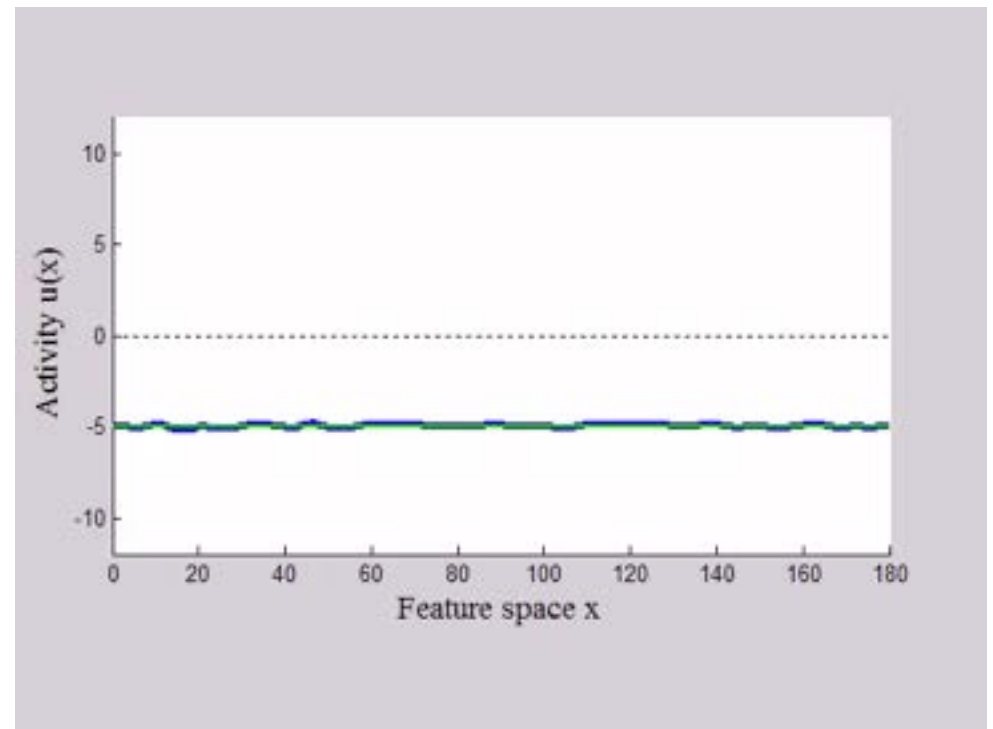
Neural Dynamics

Gregor Schöner, RUB, Germany Coordinator

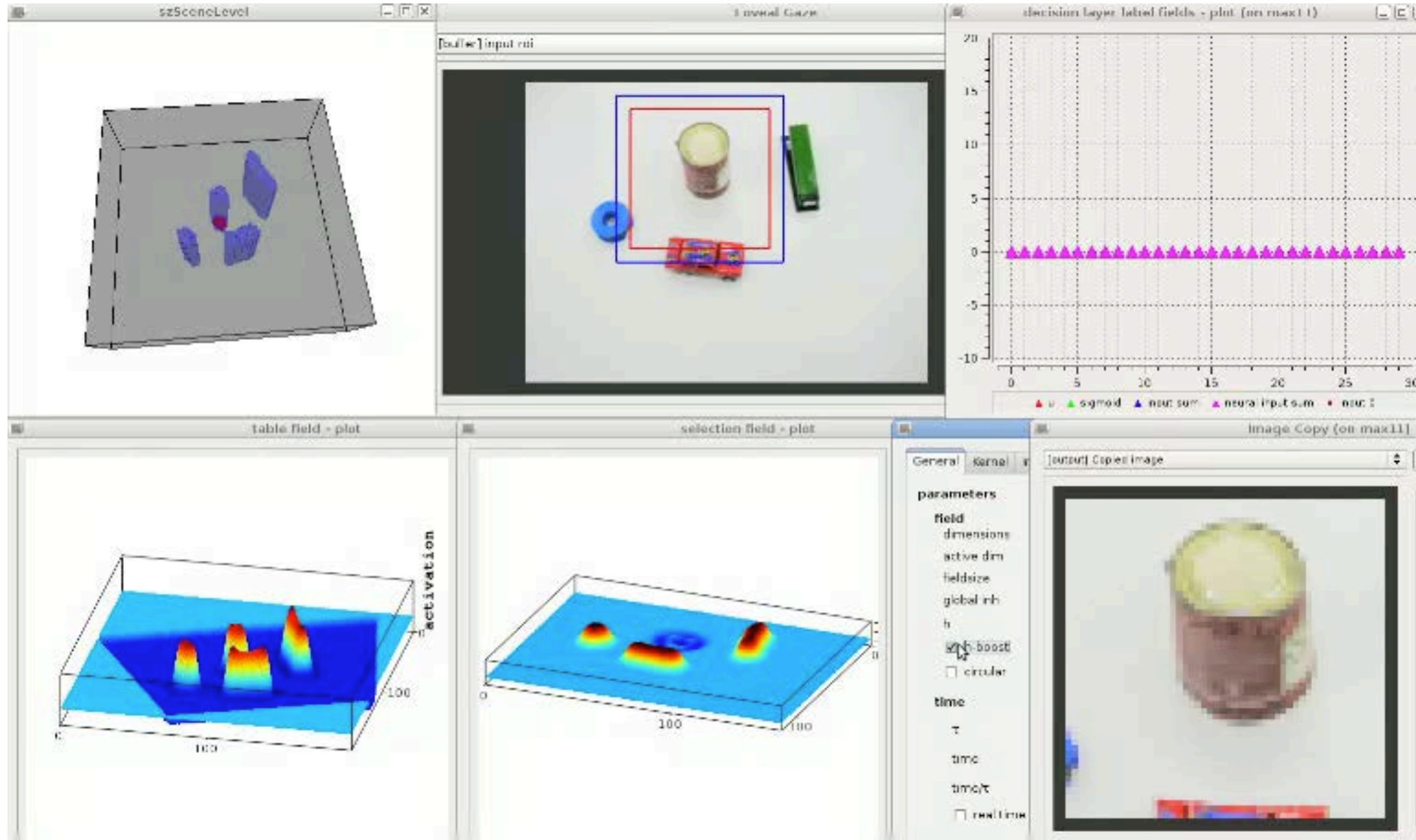
Manfred Hild, Humboldt Univ. Berlin, Germany, “User”

Unique contribution of Neural Dynamics

- radical concept: build cognitive robots in the language of the mind, **neural dynamics**
- population code in the higher nervous system: space and time continuous neural activation fields... dominated by interaction
- activation peaks as attractors
- cognitive processes emerge from instabilities: detection, selection, memory, sequencing...



Step change: Cognition from Neural Dynamics

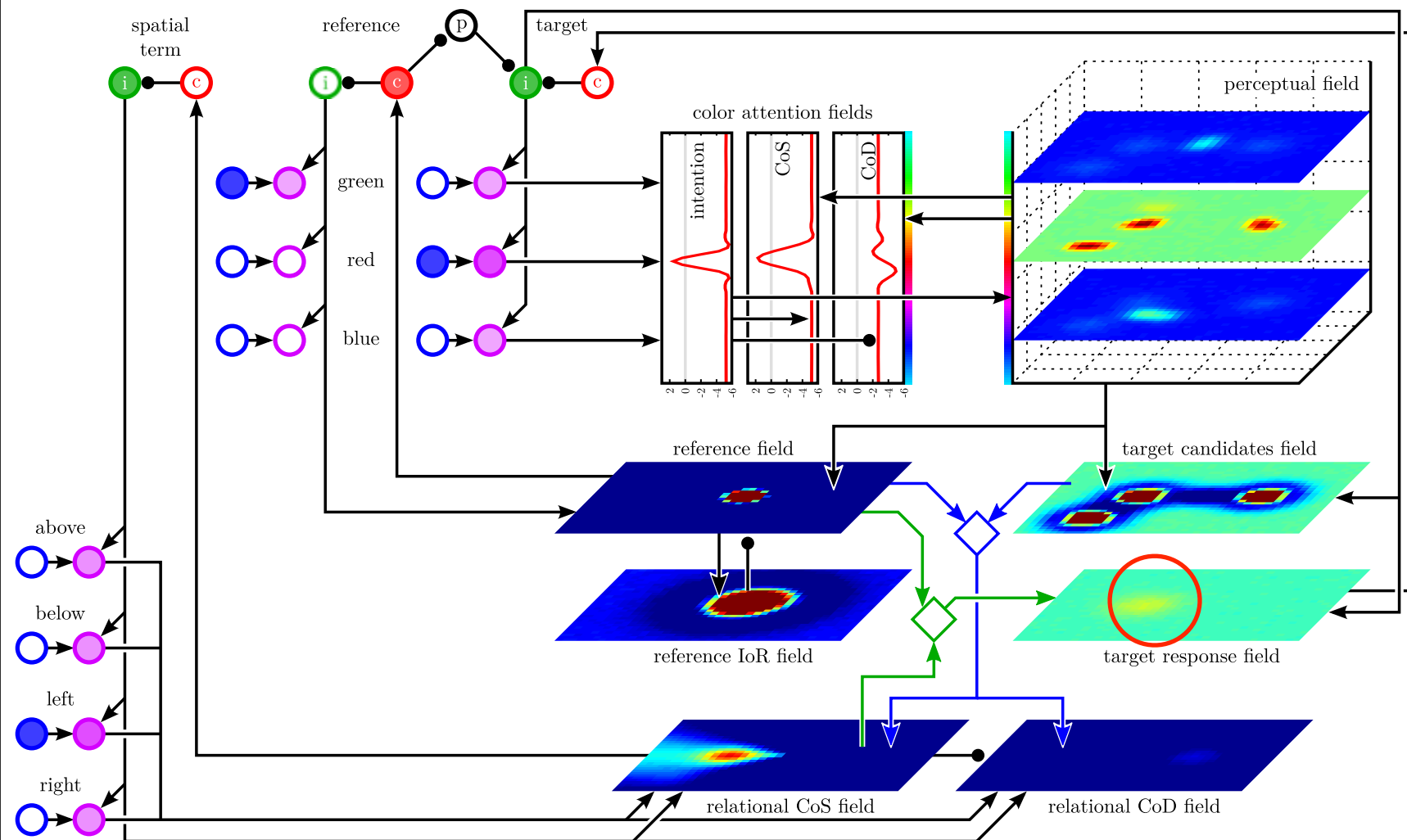


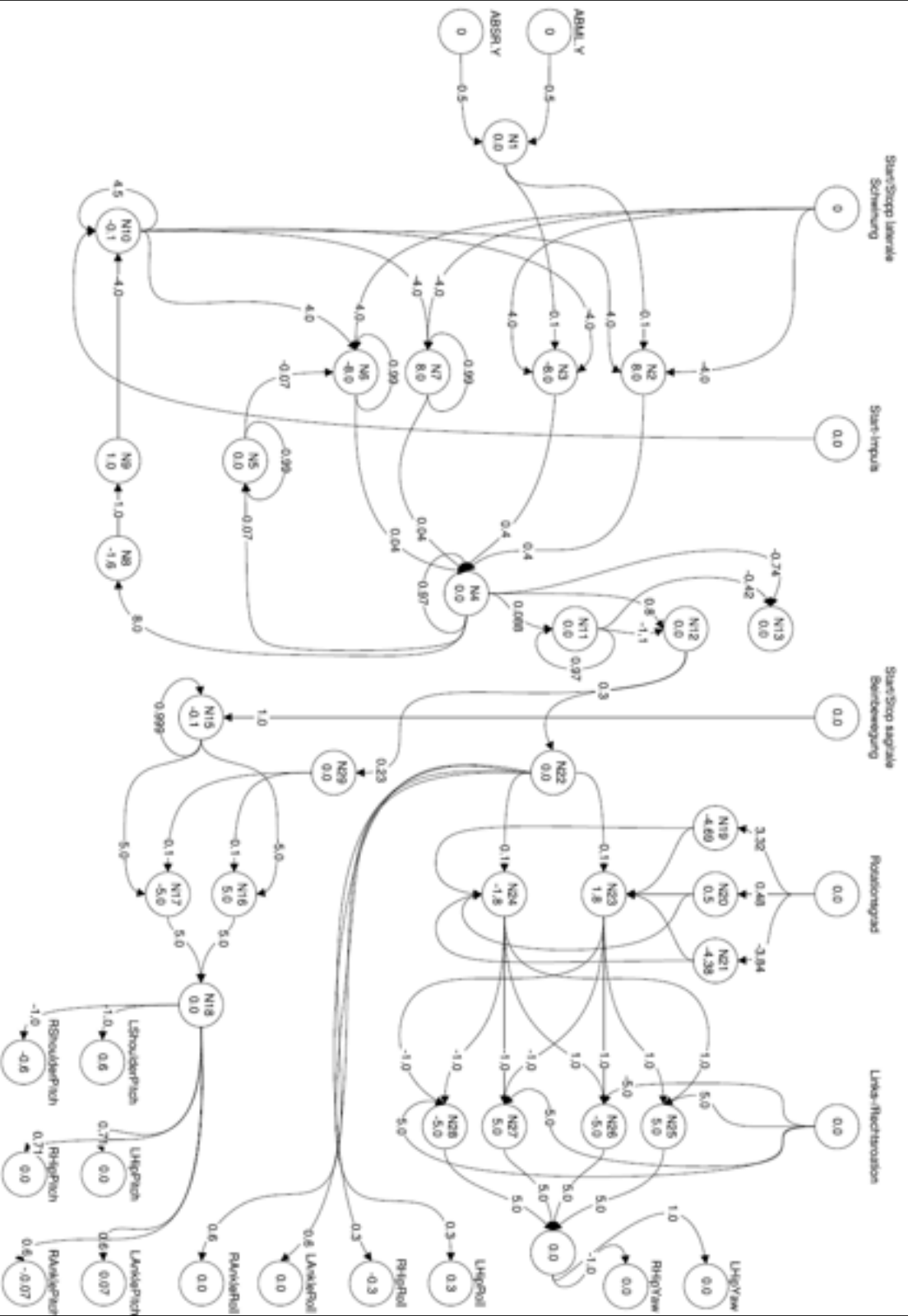
Step change: Cognition from Neural Dynamics

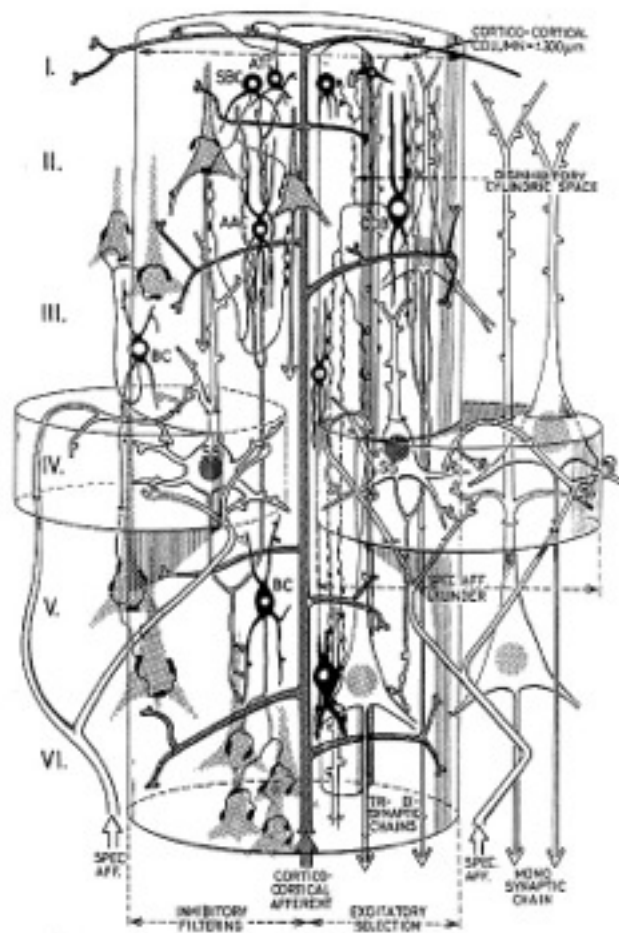
- neural dynamics as a new principle of analog computation, with “flip-flops” at the level of cognitive processing
- => a new quality for neural methods: enable human like cognition....

.. toward higher cognition

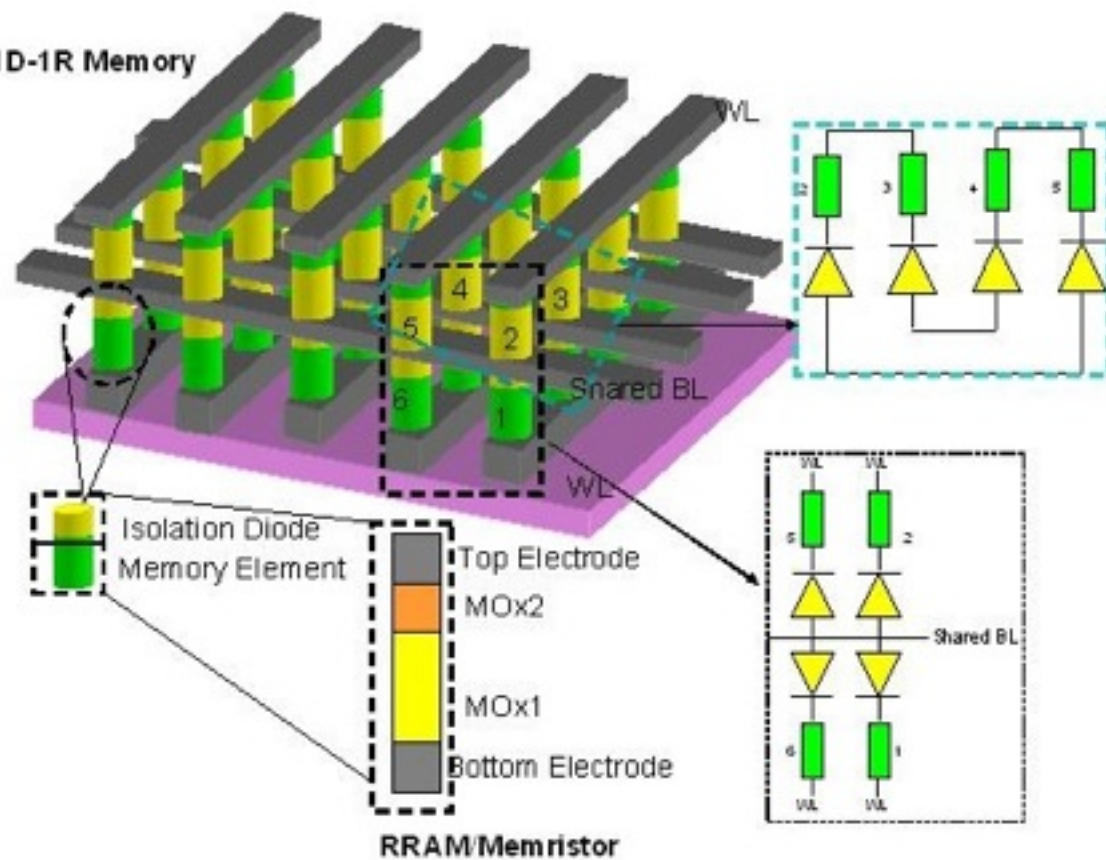
“what is to the left of the green cup”







1D-1R Memory



International Technology Roadmap for Semiconductors

