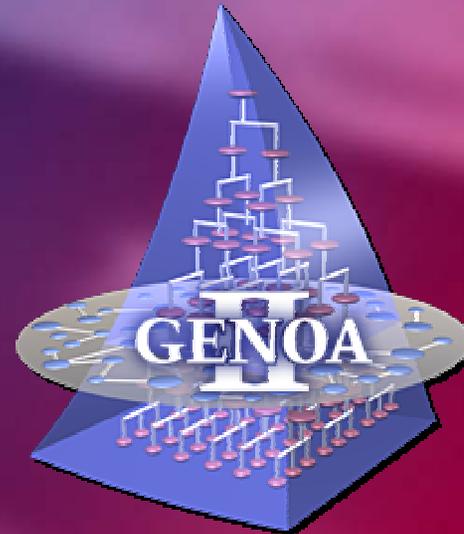




***DARPA*Tech**

2002 Symposium

Transforming
Fantasy

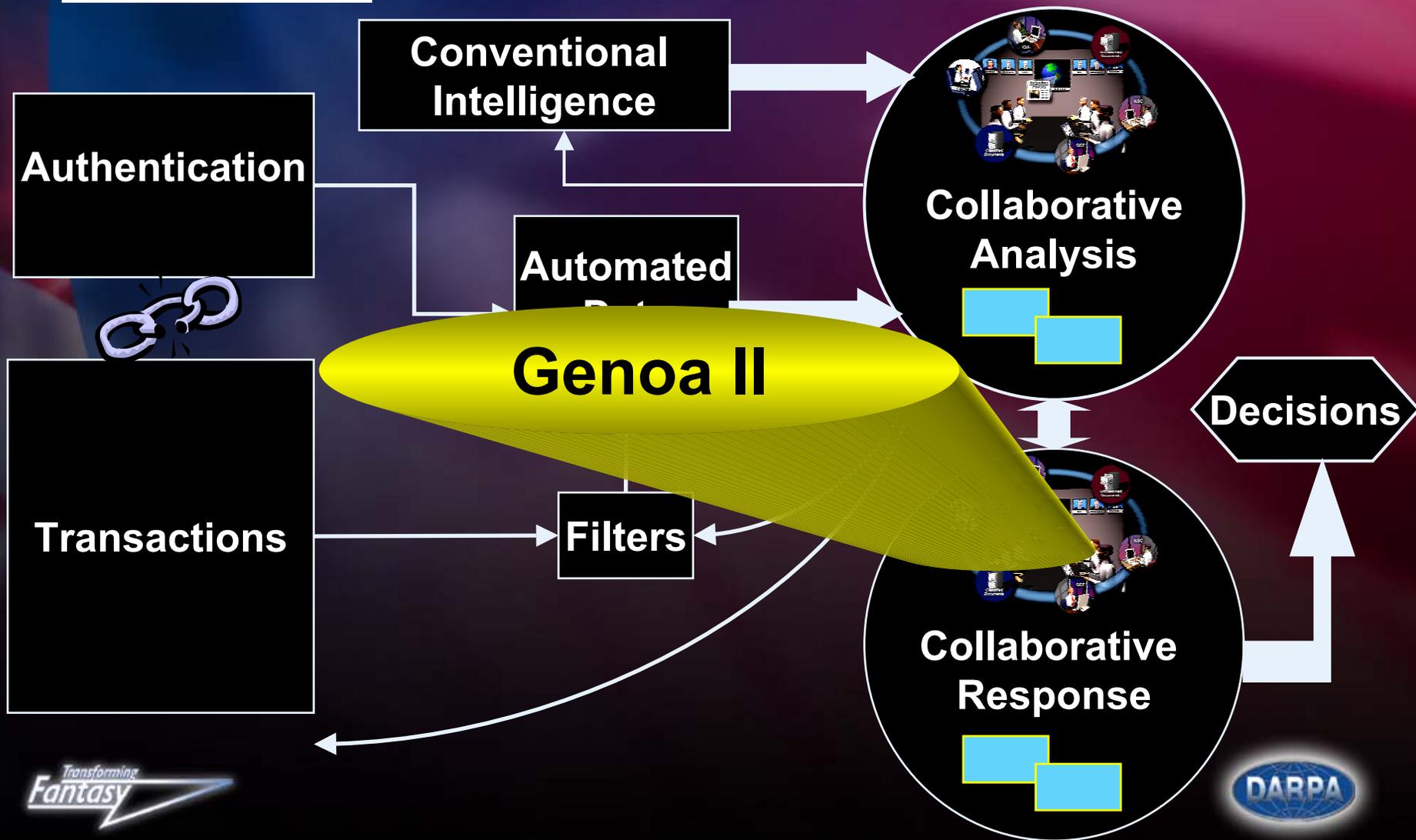


Genoa II

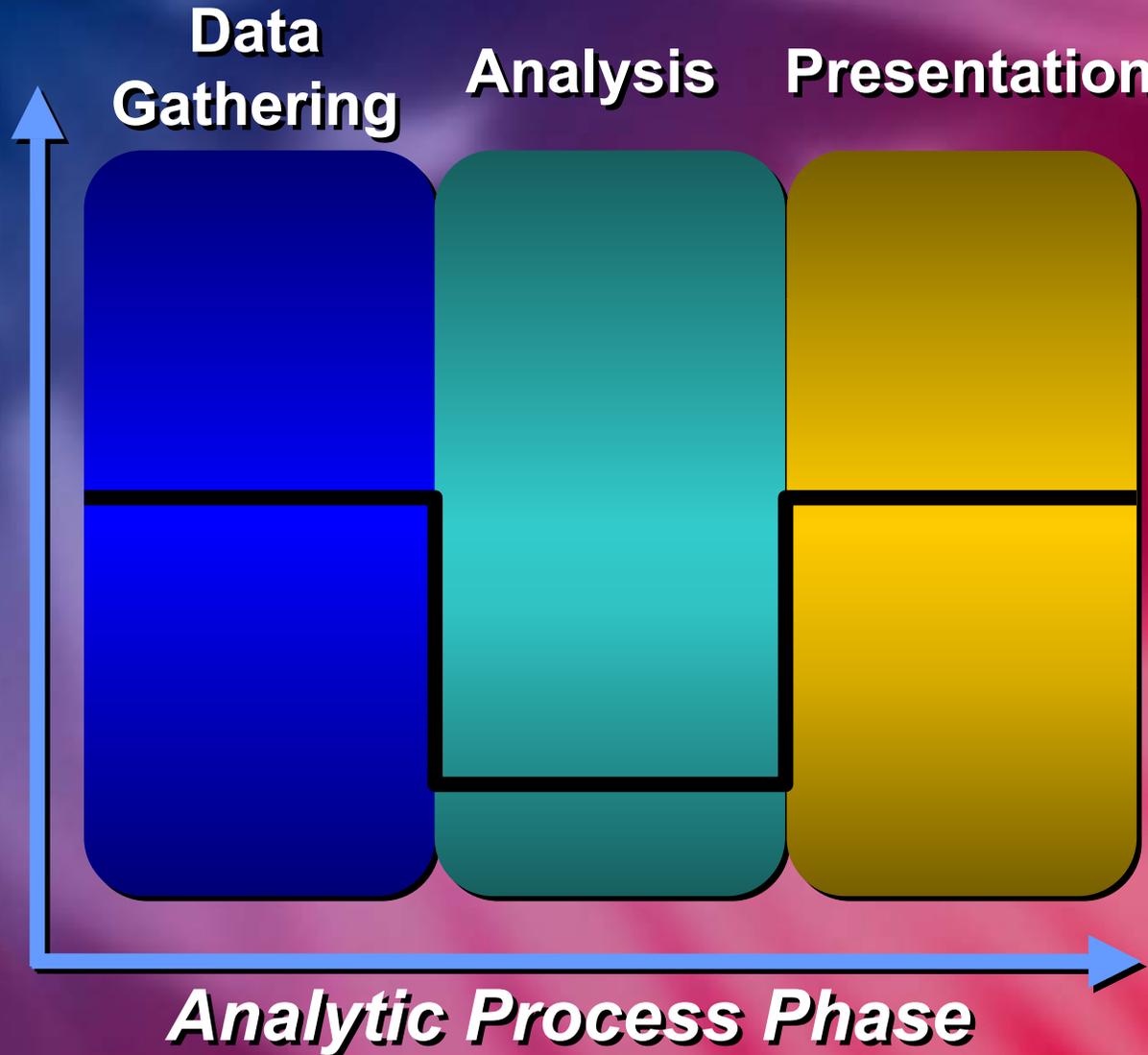
Tom Armour
Information Awareness Office

Total Information Awareness

Functional View



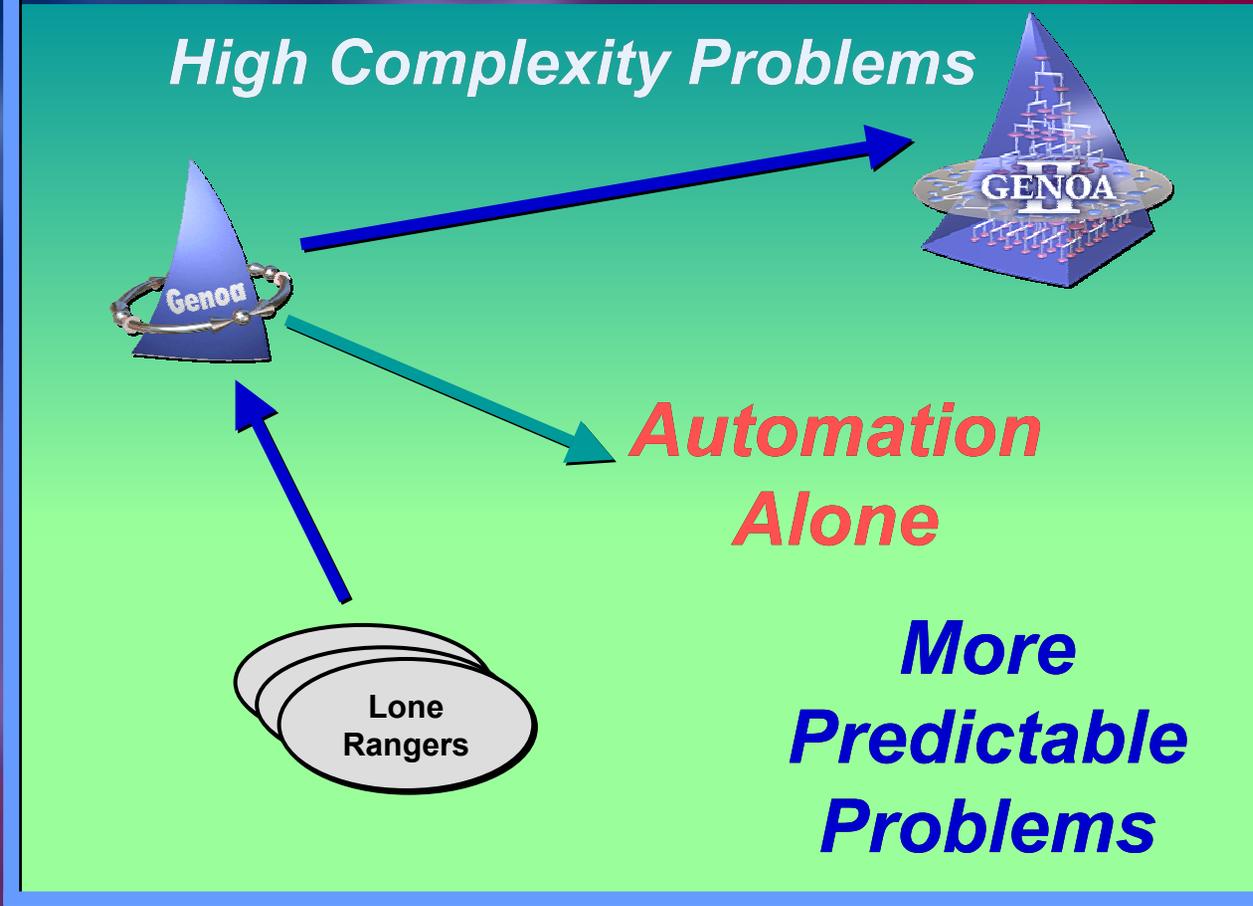
The Bathtub



Challenges

- ▶ Need *faster* systems of humans and machines—invert the “bathtub”
- ▶ Break down the information stovepipes.
- ▶ Overcome wetware limitations
- ▶ Deal with data biases, especially deliberate deception
- ▶ Rapidly and deeply understand complex and uncertain situations

Smarter



Faster



Genoa II Themes

- ▶ “Faster” → Automation
- ▶ “Smarter” → Cognitive Amplification
- ▶ “Jointer” → Center-Edge Collaboration



Automation

- ▶ Front End
 - Data gathering
 - Sorting
 - Organizing
 - Visualizing
- ▶ Back End
 - Truth maintenance
 - Explanation generation
- ▶ End-to-end
 - “Aware,” “Smart,” “Adaptive” environment



Genoa II Automation Goals

- ▶ Read everything without reading everything
- ▶ Maintain a consistent and accessible world view
- ▶ Begin the trip: computers as servants → partners → mentors



Cognitive Amplification

“Just as you cannot do very much carpentry with your bare hands, there is not much thinking you can do with your bare brain.”

(Bo Dahlbom and Lars-Erik Janlert as cited by Dennett in Kinds of Minds.)



Center-Edge Coexistence



Genoa II Themes

- ▶ “Faster” → Automation
- ▶ “Smarter” → Cognitive Amplification
- ▶ “Jointer” → Center-Edge Collaboration



***DARPA*Tech**

2002 Symposium

Transforming
Fantasy