



TOWARDS A METHODOLOGY TO DETECT, UNDERSTAND AND FIGHT FAKE NEWS

A HUMAN SYSTEMS INTEGRATION (HSI) APPROACH

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“FAKE NEWS” IS NOT MY CORE FIELD OF RESEARCH!

MY WORLD FOR MORE THAN 40 YEARS...



... in design & operations

Accuracy and reliability of information



Accuracy and reliability of information

Check the facts ...

Check our own instincts ...

Take calculated risks ...



Fake news is **false or misleading information** presented as news. Fake news often has the aim of damaging the **reputation** of a person or entity, or making **money** through advertising revenue. [Wikipedia](#)

AEROSPACE & FAKE NEWS?

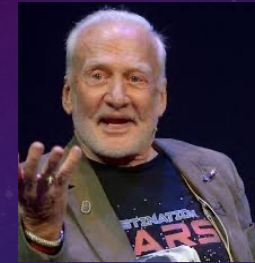
~~Flat Earth theory???~~

Uncertainty in space operations... **REDUCE & MANAGE**

Situation awareness...

Decision-making...

Risk taking...



Trust management

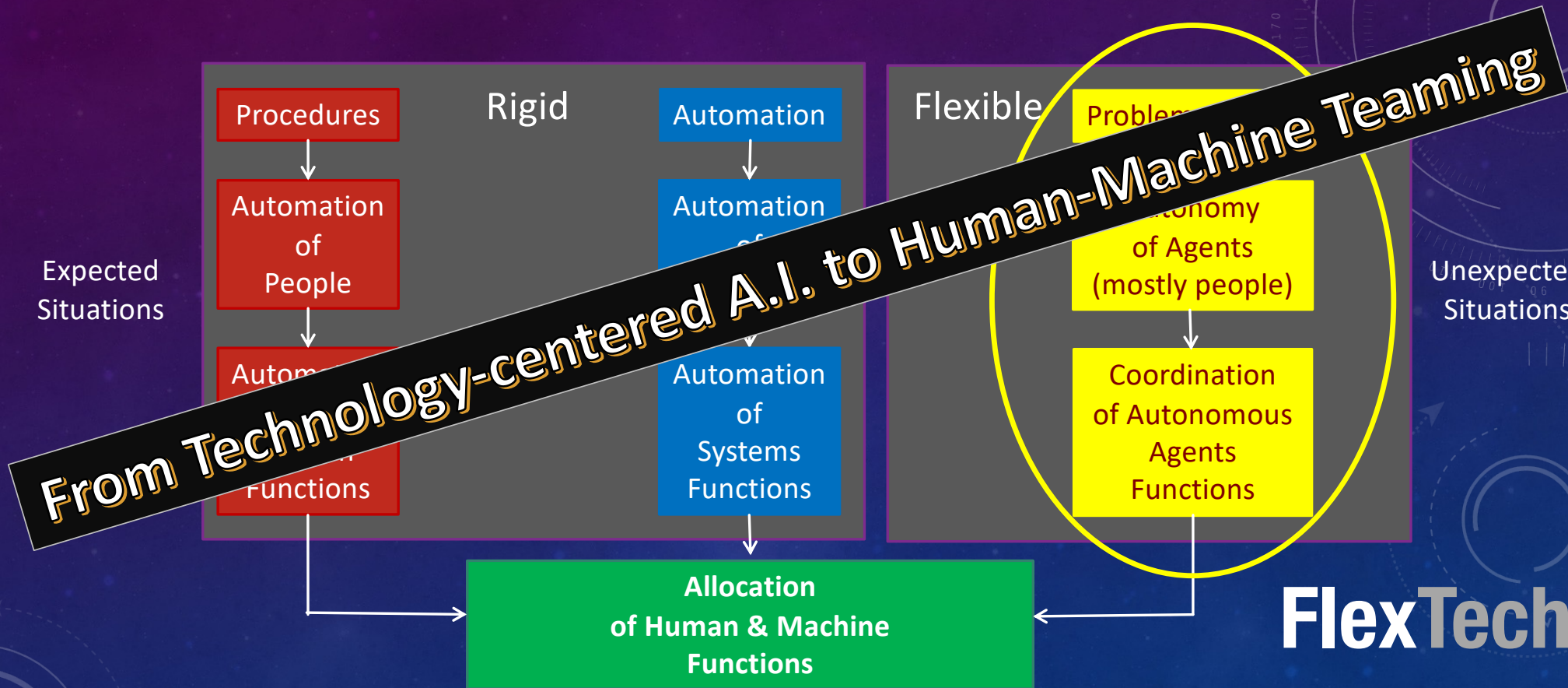
Knowledge, Experience & Expertise

Artificial Intelligence

Human-Machine Teaming

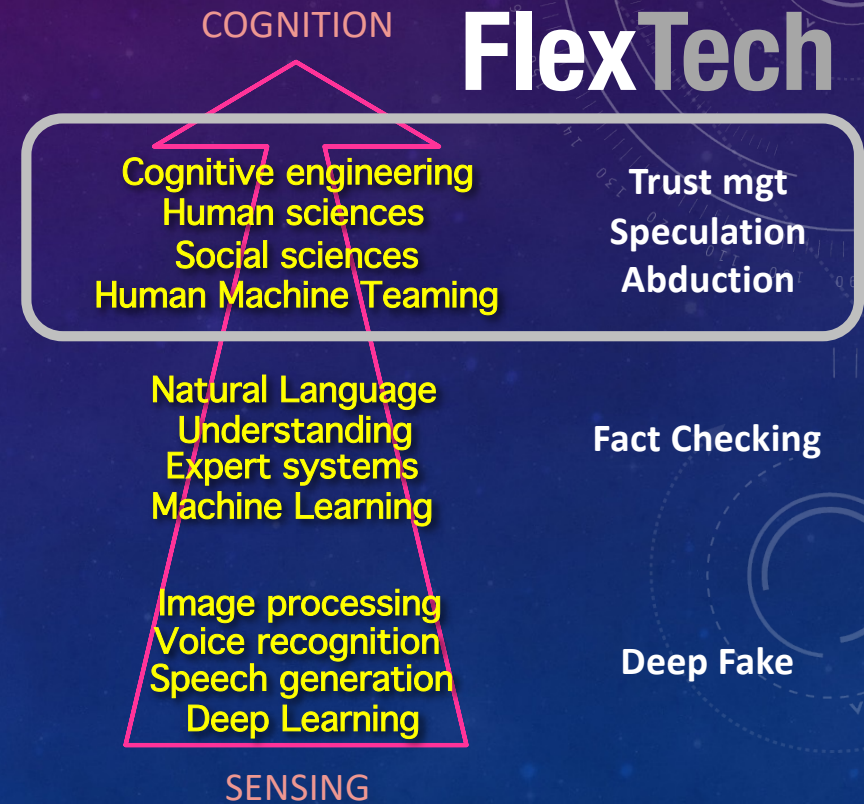
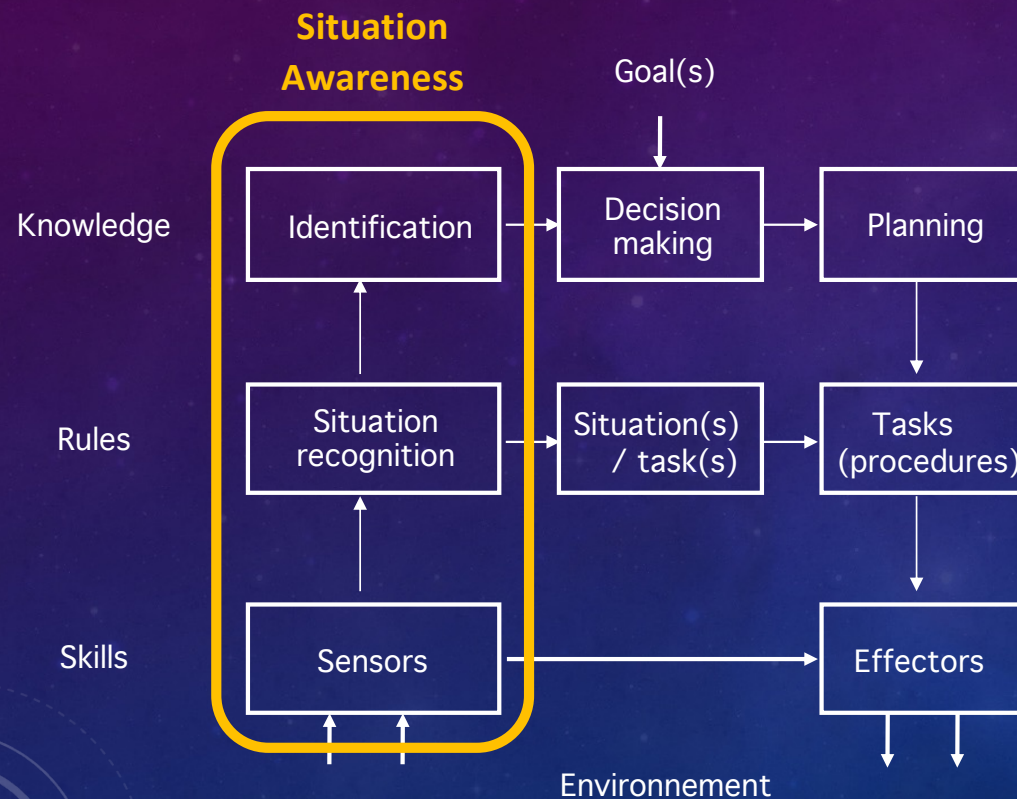
In life-critical situations,
TRUTH is difficult to access...
... we need to deal with **TRUST!**

FROM RIGID AUTOMATION TO FLEXIBLE AUTONOMY



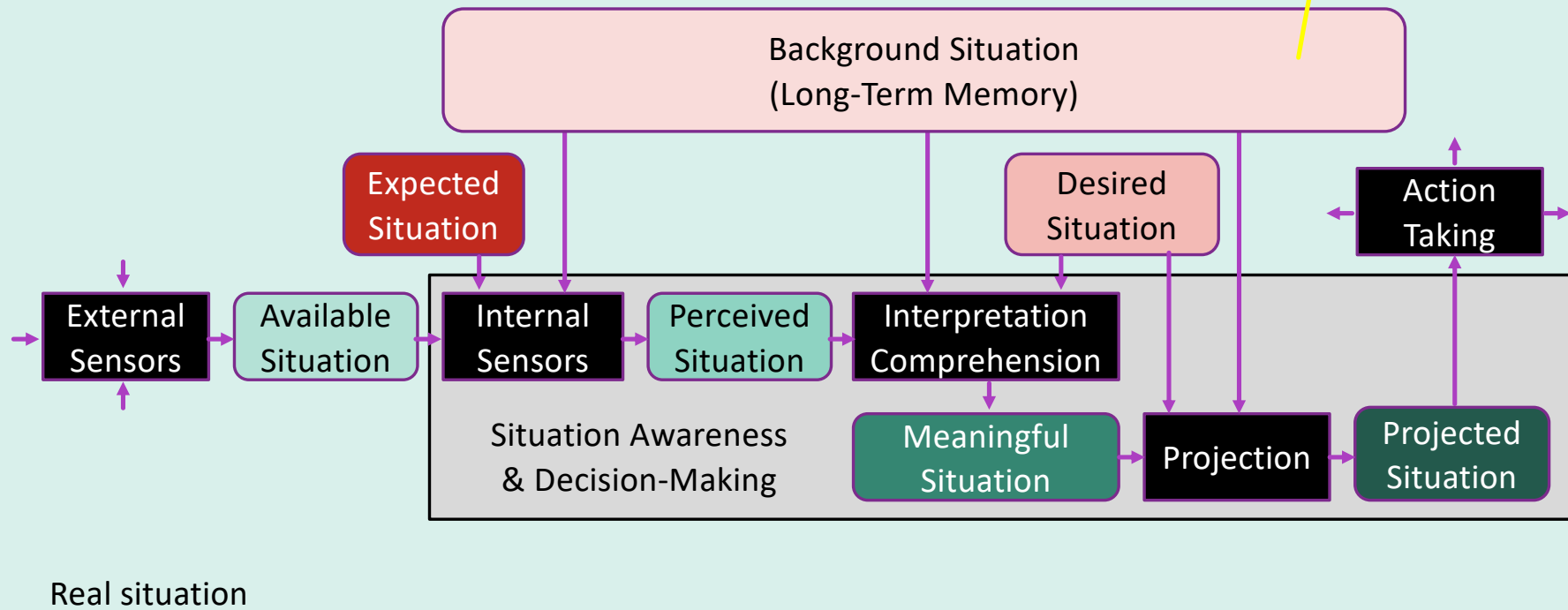
VARIOUS LEVELS OF AUTOMATION

From aerospace control models to fake news awareness, decision-making & action
(Rasmussen's model)

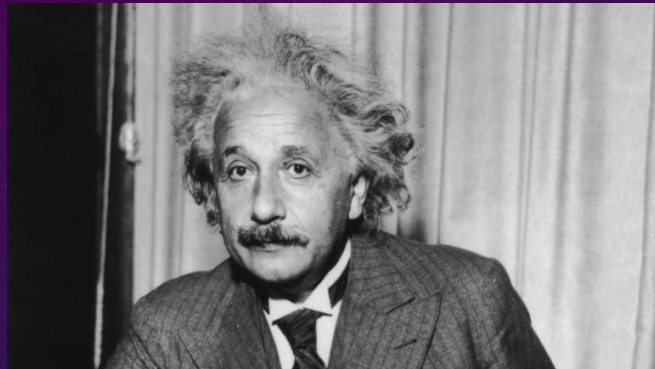


WHAT IS SITUATION AWARENESS (S.A.)?

Educated
Common Sense



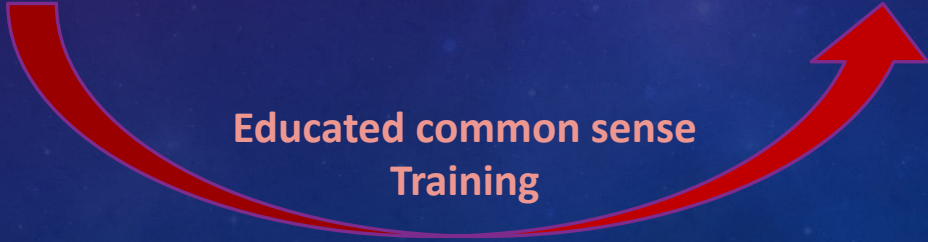
FROM EDUCATED COMMON SENSE TO PHYSICAL & FIGURATIVE TANGIBILITY



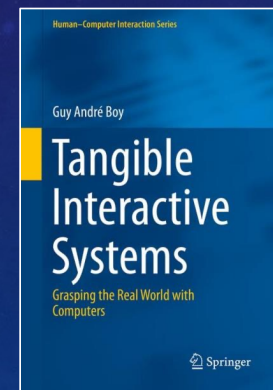
Common sense is nothing more than a deposit of prejudices laid down in the mind before age eighteen.

As early as possible and throughout life

EDUCATION & TRAINING



- Complexity
- Maturity
- Flexibility
- Stability/Resilience
- Sustainability



TRUST DEPENDS ON ATTENTION TO THE SITUATION...

PERCEPTION

- Lexical (typos, bad pictures, ...)
- Syntactic (language inconsistencies, ...)
- Semantic (inappropriate content, ...)
- Pragmatic (cultural differences, ...)

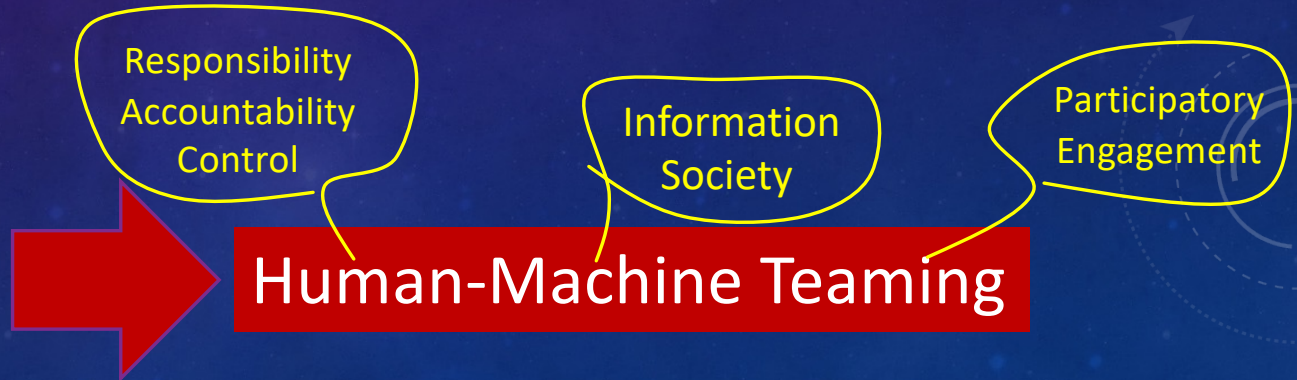
COMPREHENSION

- Meaning (critical thinking, ...)
- Novelty (unfamiliarity, ...)
- Urgency (emergent behaviors, ...)

PROF...

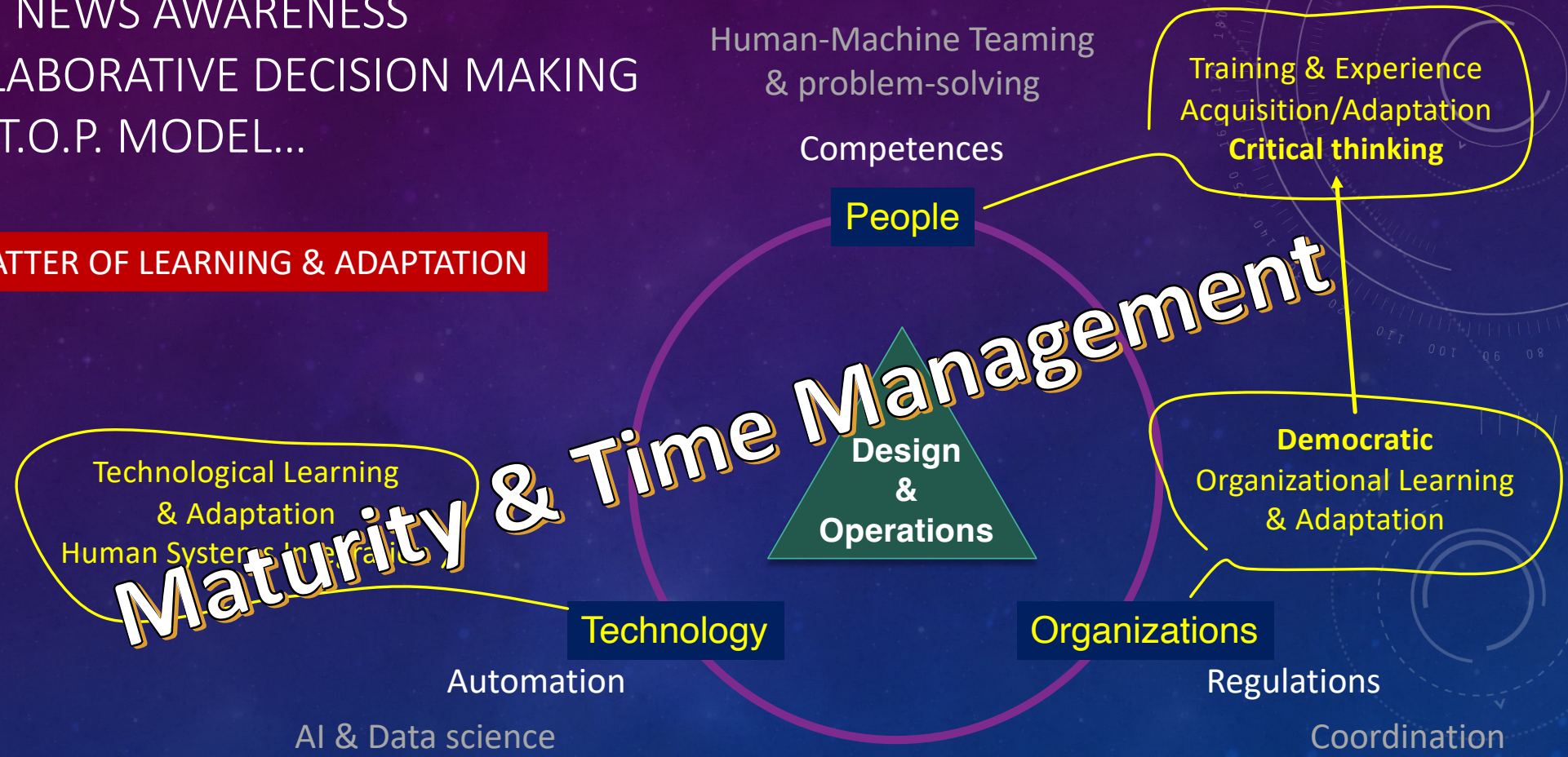
- Commitment (experience, ...)
- Benefit (desired situation, ...)
- Organizational support (teaming, ...)
- Life-critical situation (danger, ...)

Freedom repercussions of automated fake news analysis



FAKE NEWS AWARENESS
COLLABORATIVE DECISION MAKING
THE T.O.P. MODEL...

A MATTER OF LEARNING & ADAPTATION



REFERENCES FOR THIS PRESENTATION

- Cognitive Function Analysis
- The Handbook of Human-Machine Interaction
- Orchestrating Human Centered Design
- Human Systems Integration
- Design for Flexibility
- Risk taking, Prevention & Design

- ... maintaining curiosity at the highest level!

