

TRUST IN AUTOMATION

A necessary component to realizing automation's potential

Trust in automation is a multi-dimensional, interdependent problem space involving automation trustworthiness, human trust, and human reliance shaping automation's contribution to cyber operations.

PERSPECTIVES

AUTOMATION LIFECYCLE
PRE-IMPLEMENTATION
IMPLEMENTATION
INITIAL USE
SUSTAINED USE
ROLES/ PERSONAS
CISOs
SECURITY ARCHITECTS
OPERATION MANAGERS
ANALYSTS
SOURCES OF (MIS)TRUST
SECURITY
AUTOMATION ALGORITHMS
COMMUNICATION (HM & MM)
INFORMATION
OPERATIONAL FIT
TYPES OF AUTOMATION
SENSING
SENSE-MAKING
DECISION MAKING
ACTING
CONTROL & MANAGEMENT
SCOPE OF AUTOMATION / AUTONOMY
NO AUTOMATION
SINGLE FUNCTION AUTOMATION
COMBINED FUNCTION AUTOMATION
PARTIAL AUTONOMY
FULL AUTONOMY

CONDITION

ATTITUDE

LEVEL OF TRUST
NO TRUST
LIMITED TRUST
CALIBRATED TRUST
EXCESSIVE TRUST

CONDITION

BEHAVIOR

LEVEL OF RELIANCE
NO RELIANCE
UNDER RELIANCE
CALIBRATED RELIANCE
OVER RELIANCE

INFLUENCERS

HUMAN

PERCEIVED LEVEL OF CONTROL	PERCEIVED ACCOUNTABILITY
UNDERSTANDING OF AUTOMATION	
PERCEIVED SELF SKILL LEVEL	SELF CONFIDENCE
PERCEPTION OF UTILITY	

TECHNOLOGY

AUDITABILITY/ MEASURABILITY	TRANSPARENCY
REPUTATION	SIMPLICITY/ CERTAINTY
TIMELINESS	RELIABILITY
SUSTAINABILITY	RESILIENCY/ REVERSIBILITY

ENVIRONMENT

THREAT LEVEL	WORKPLACE CULTURE
TASK COMPLEXITY	SITUATION AWARENESS
WORKLOAD	TASK DIFFICULTY

CONDITION

PERCEPTION

LEVEL OF TRUSTWORTHINESS
NO TRUSTWORTHINESS
LIMITED TRUSTWORTHINESS
ENABLING TRUSTWORTHINESS
DECEPTIVE TRUSTWORTHINESS

RESULT

AUTOMATION

LEVEL OF CONTRIBUTION
NO CONTRIBUTION
LIMITED CONTRIBUTION
VALUABLE CONTRIBUTION
EXCESSIVE CONTRIBUTION

SPEED AT SCALE
OPERATIONAL CONSISTENCY
RISK REDUCTION
GREATER HUMAN IMPACT