



SAPICS
THINK SUPPLY CHAIN  THINK SAPICS



INNOVATION IN MOTION
8 - 11 June 2025

The Leading Event in Africa for Supply Chain Professionals
47th ANNUAL CONFERENCE
Century City Conference Centre, Cape Town

The Trust Advantage; How to Build High Performing Supply

Chains That Deliver

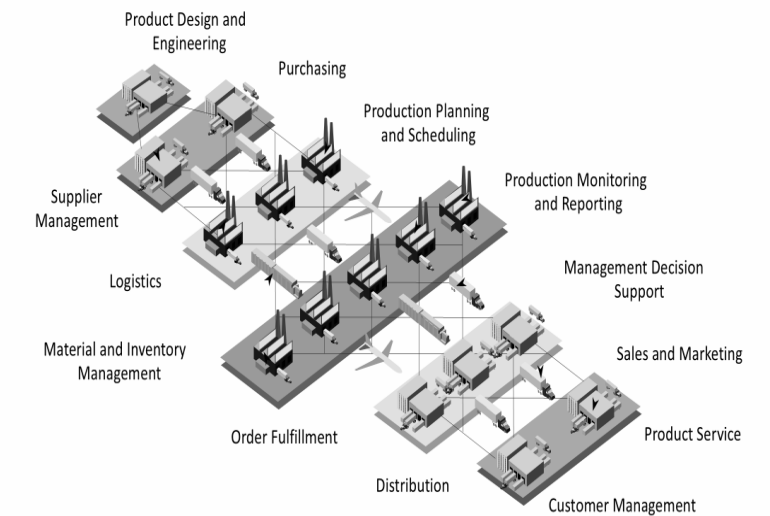
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The Trust Advantage; How to Build High Performing Supply Chains That Deliver



Greg Schlegel
Founder Managing Partner
The SCRM Consortium



tolerance
cognitive
strategies
bias
resilience
management
risk
appetite
culture
perspectives



SAPICS Conference
JUNE 9, 2025
gregschlegel@thescrmconsortium.com

AI-ML Powered SC Trust Matrix Advantage

AGENDA

- 1 A Brief Background about Trust
- 2 Challenges of Data Transparency in Supply Chain
- 3 Progress Report from an Ongoing SC Trust Project
- 4 Benefits Derived from Improving Trust in the SC Ecosystem



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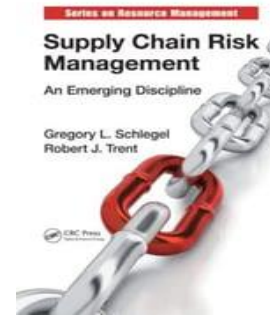


“The Voice of Supply Chain Risk & Resilience”

5 Service Offerings

1. Online Education...2 Certificate Courses

- ❖ Virtual Training - Certified
- ❖ Face-to-Face 1, 3, 5 Days



2. Journey Coaching & Consulting

- ❖ Customized Workshops
- ❖ SC War Room Development

3. Enterprise SaaS SCR&R Platform Solutions

- ❖ SC Risk & Resiliency Visibility

4. SC Management Online Readiness

Assessment Tool

- ❖ Best-In-Class, Industry Benchmarking
- ❖ Tailored Journey Action Planning

5. Prescriptive Online SCR&R 90-Day Action Plan Tool

- ❖ Maturity, Risk Appetite, Culture & Action

Plan using AI/ML algorithms

Certified Body of Knowledge

EDUCATION

GregSchlegel
@theSCRMConsortium.com



ADVISORY
90-Day Action Plans

CONSULTING



Strategic **SPMS**
PM Solutions, Inc



AI/ML Real-Time
RISK Management

SaaS



AI-ML Powered SC Trust Matrix Advantage

AGENDA

1 A Brief Background about Trust



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Trust Definition [Webster's]

- **A firm belief in the reliability, truth, or ability of someone or something**
- **Freedom from suspicion/doubt**
- **Acceptance of the truth of a statement without evidence or investigation**
- **The state of being responsible for someone or something**



TRUST Expert Perspectives



“Trust always affects two measurable outcomes: speed and cost. When trust goes down—in a relationship, on a team, in a company, in an industry, with a customer—speed decreases with it. Everything takes longer.”

Stephen Covey



“Systems thinking is a framework for seeing interrelationships rather than things, for seeing patterns rather than static snapshots”.

Peter Senge



*“Our fear of complex systems drives us to **dissect the complex system into sub-systems**, leading to diverting management attention to chase local optima.”*

Eli Goldratt

Threads about Trust Discussions at Davos 2025

*“One thread that was evident—Delegates had a **nervous optimism**. One comment from an observer---**we have rarely seen attendees with so many divergent outlooks for the future,**”*

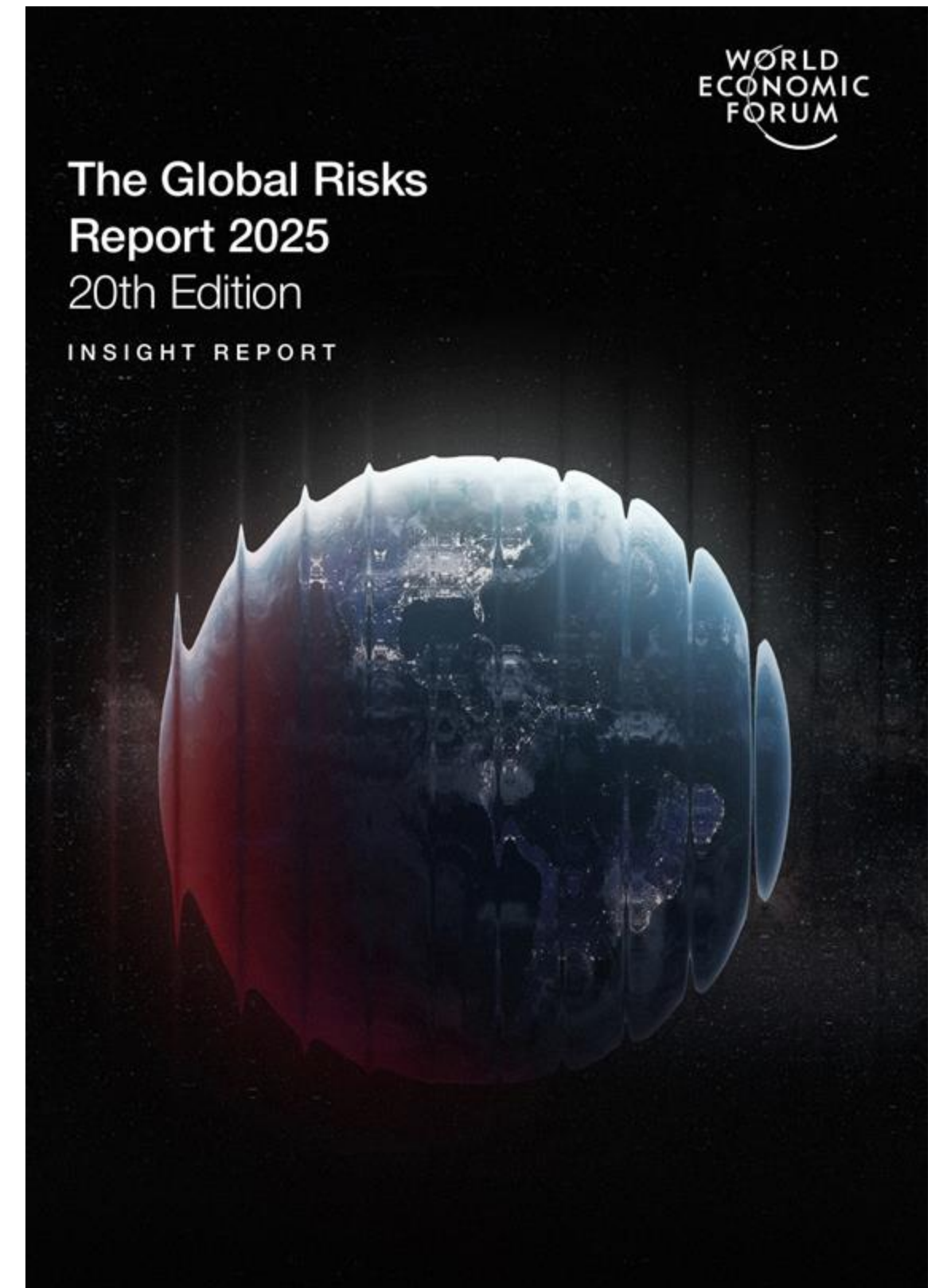
Major topics of discussion

- *Economic direction*
- *Tariffs*
- *AI everywhere*
- *Finance industry strength/realignment, again*
- *World-wide health and demographics*

Interesting theme in every private conversation.

*“In quiet conversations, the all too familiar thread was—**TRUST**. Trust in institutions and in the corporate world. Trust in **leadership appears to be at an all-time low.**”* Frequent

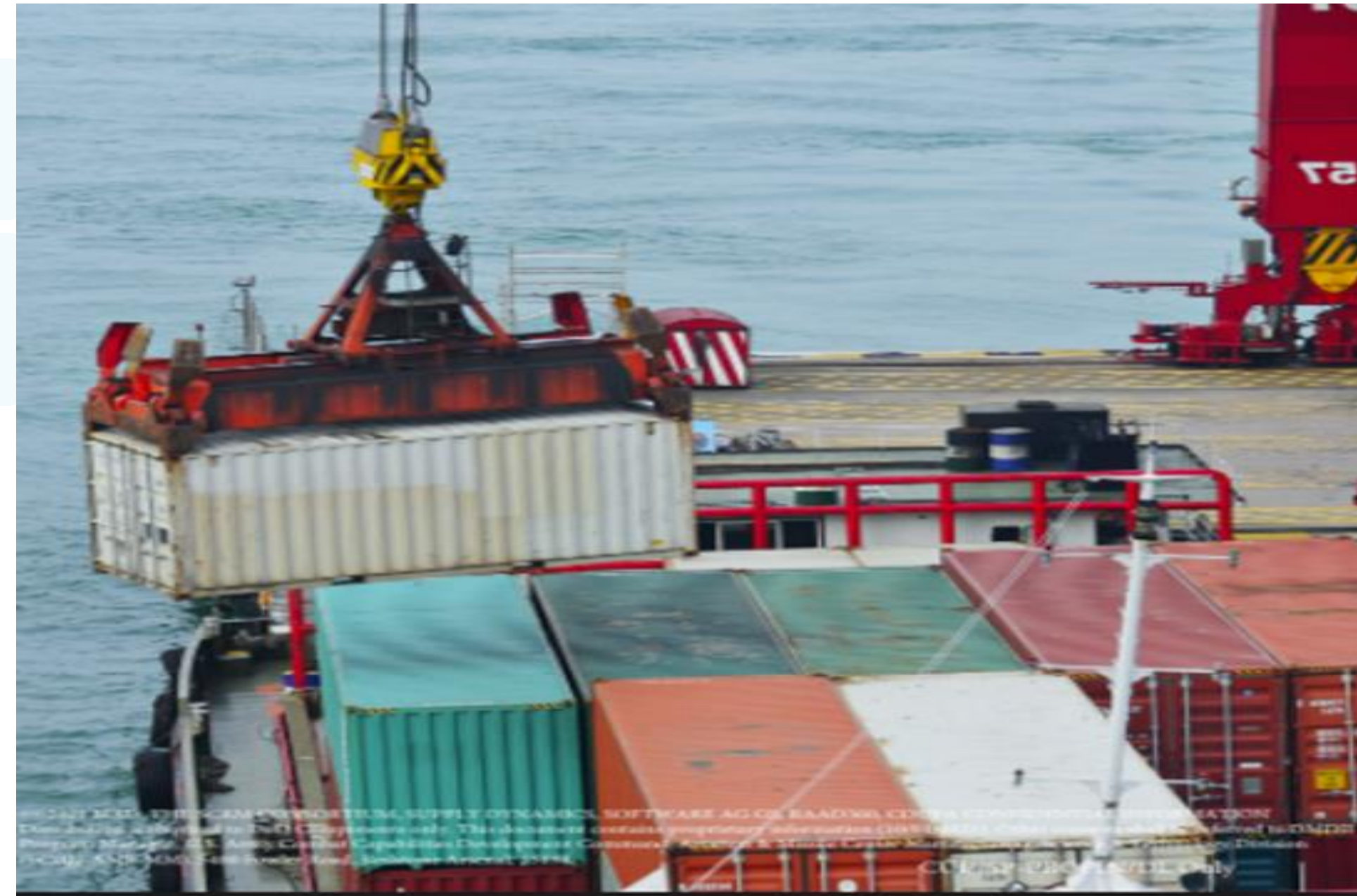
Davos Consultant



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Challenges in achieving transparency Organizations cite several obstacles to obtaining accurate data from Tier 2 and beyond:

- 35% struggle with **supplier cooperation** and **data sharing limitations**.
- 32% report **poor data quality**
- 28% **lack appropriate technologies** or tools
- 23% cite **budget constraints** as a barrier to improving transparency.
- 22% **lack internal resources or time** to address transparency issues.

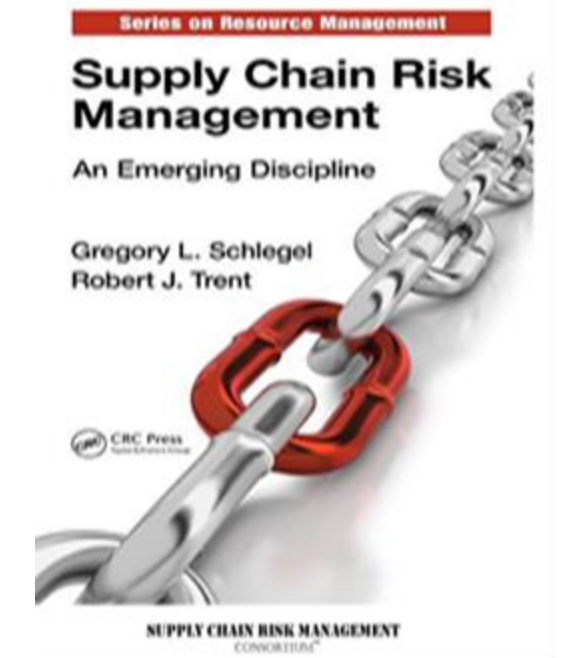
CPO Study 2025

Enterprise Resiliency

Dr. Robert J. Trent & Gregory Schlegel, *Lehigh University*

“Supply Chain Risk Management: An Emerging Discipline”

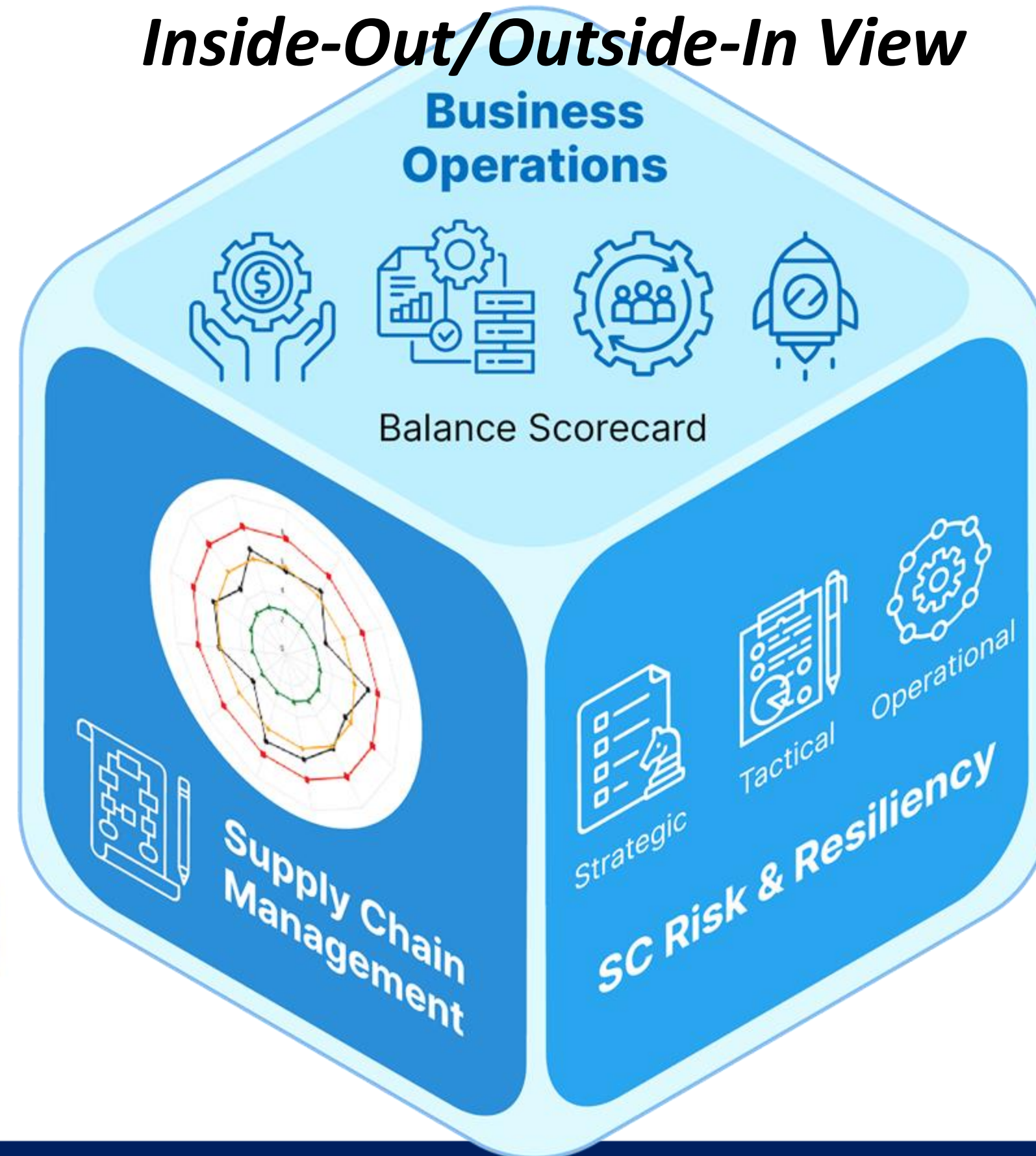
“A resilient enterprise has the capacity to overcome disruptions and continually transform itself to meet the changing needs and expectations of its customers, shareholders and other stakeholders.”



2014

The 3 Dimensions of a Resilient Enterprise

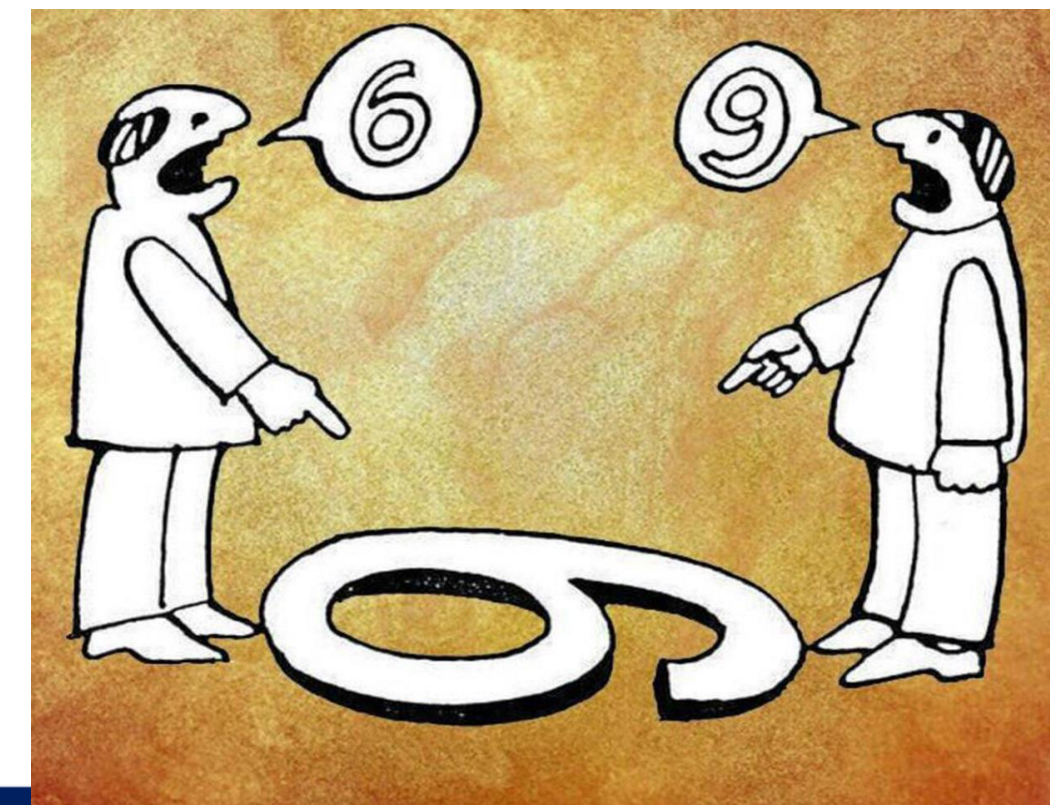
Inside-Out/Outside-In View



Inside-out View

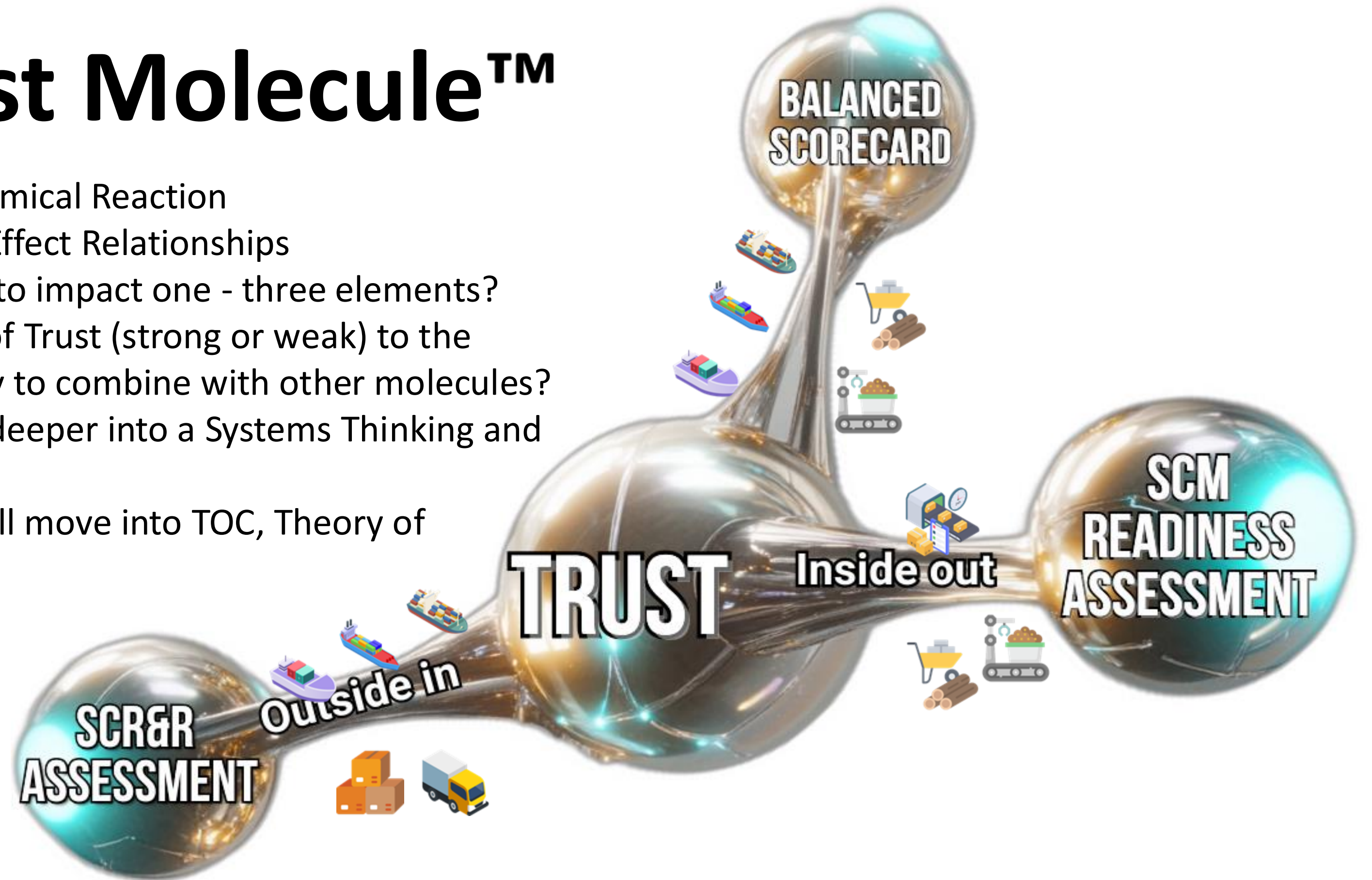


Outside-in View



The Trust Molecule™

- A Fluid Dynamic Chemical Reaction
- Involves Cause and Effect Relationships
- What is the catalyst to impact one - three elements?
- What is the impact of Trust (strong or weak) to the shape and the ability to combine with other molecules?
- The analysis will go deeper into a Systems Thinking and Sentiment Analysis
- The analysis may well move into TOC, Theory of Constraints as well



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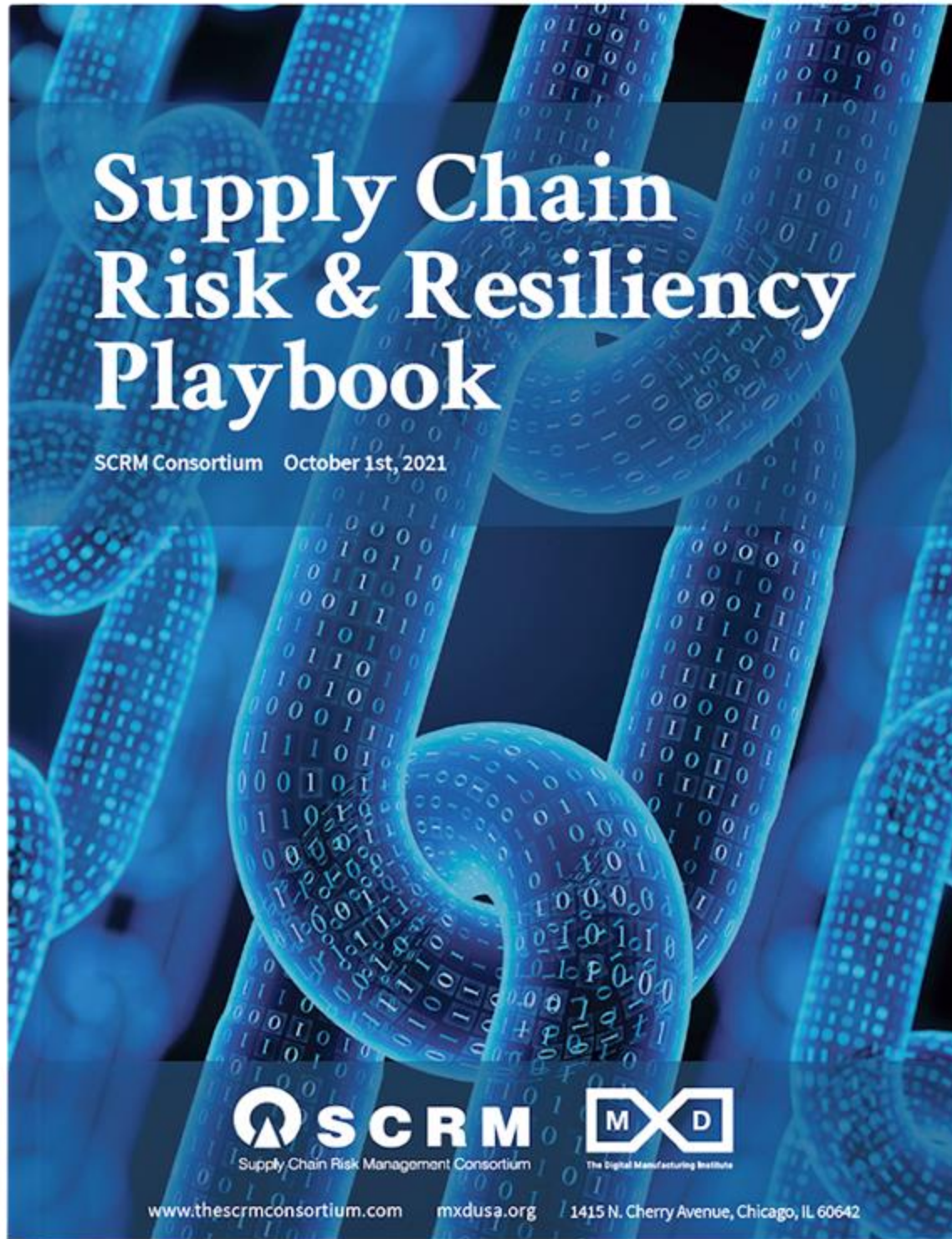
Project Overview

Addressing supply chain transparency barrier requires collaboration and technological investment. This project will begin by developing a “Minimum Viable Set of Data Elements” that foster TRUST through multi-tiered supply chains.

ALSO.....

- Ensure legal compliance and data security while developing a lightweight visibility model/framework, emphasizing strategic alignment
- Create Proof-of-Concept (POC) to validate our approach, integrating data assessment functionalities for original Equipment Manufacturer (OEM) and Small Medium Manufacturers (SMMs)
- Develop a transition strategy to foster swift implementation, enhancing operation efficiency and resilience
- Develop a model/framework to drive progress in building trust and transparency across the US manufacturing landscape.

Supply Chain Trust Matrix Core Team for the Project



Core Team	Location	Contact Name	Title
MxD	Chicago, IL	Mina Lara	Manager, Technical Programs
The SCRMC	Lewes, Delaware	Greg Schlegel	CEO
EIG	Bethlehem, PA	Jim de Vries	PI - COO
Action Engineering	Bothell, Washington	Mel Harvey	AE PM
Action Engineering	Loveland, CO	Duane Hess	AE PM Mentor, OCM
Action Engineering	Wheat Ridge, Colorado	Karen Wylie	AE Interviews
Batra	Arlington, Virginia.	Adam Barford	Managing Member
Dr. Trent - Emeritus Lehigh University	Bethlehem, PA	Bob Trent, PhD	Professor (Former Dept. Chair)
Hutcheson Associates	Lebanon, IN	Scott Hutcheson, PhD	Professor

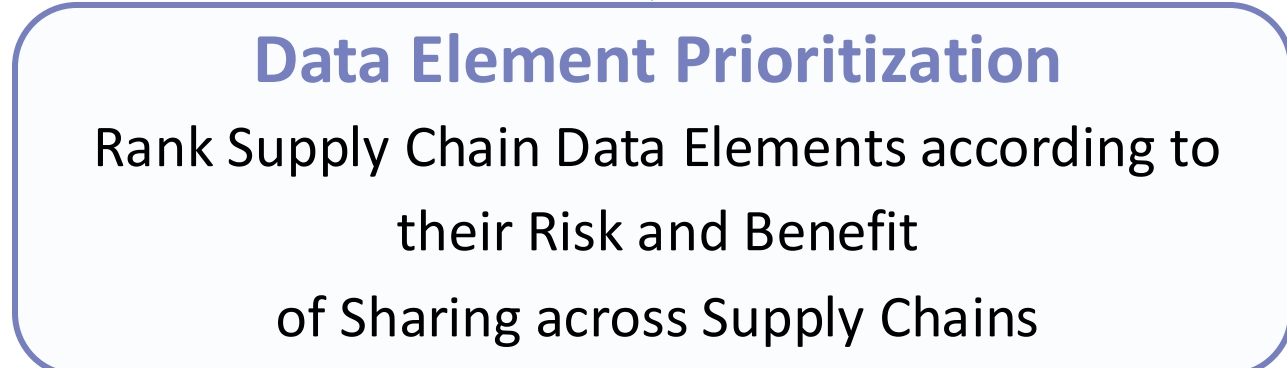
Developing the Minimum Viable Data Set

Primary VOC Research

- 1) 1:1 and Group Interviews
- 2) VOC Collaboration Workshop
- 3) Sentiment Analysis

Secondary Research

- 1) 60 Years of Research & Publishing by Dr. Bob Trent and Dr. Scott Hutchinson
- 2) Literature Research
- 3) Survey Design Experience



Tom Davenport

INDUSTRY



Dave Morrow

EXPERT



Chris Peters

REVIEW

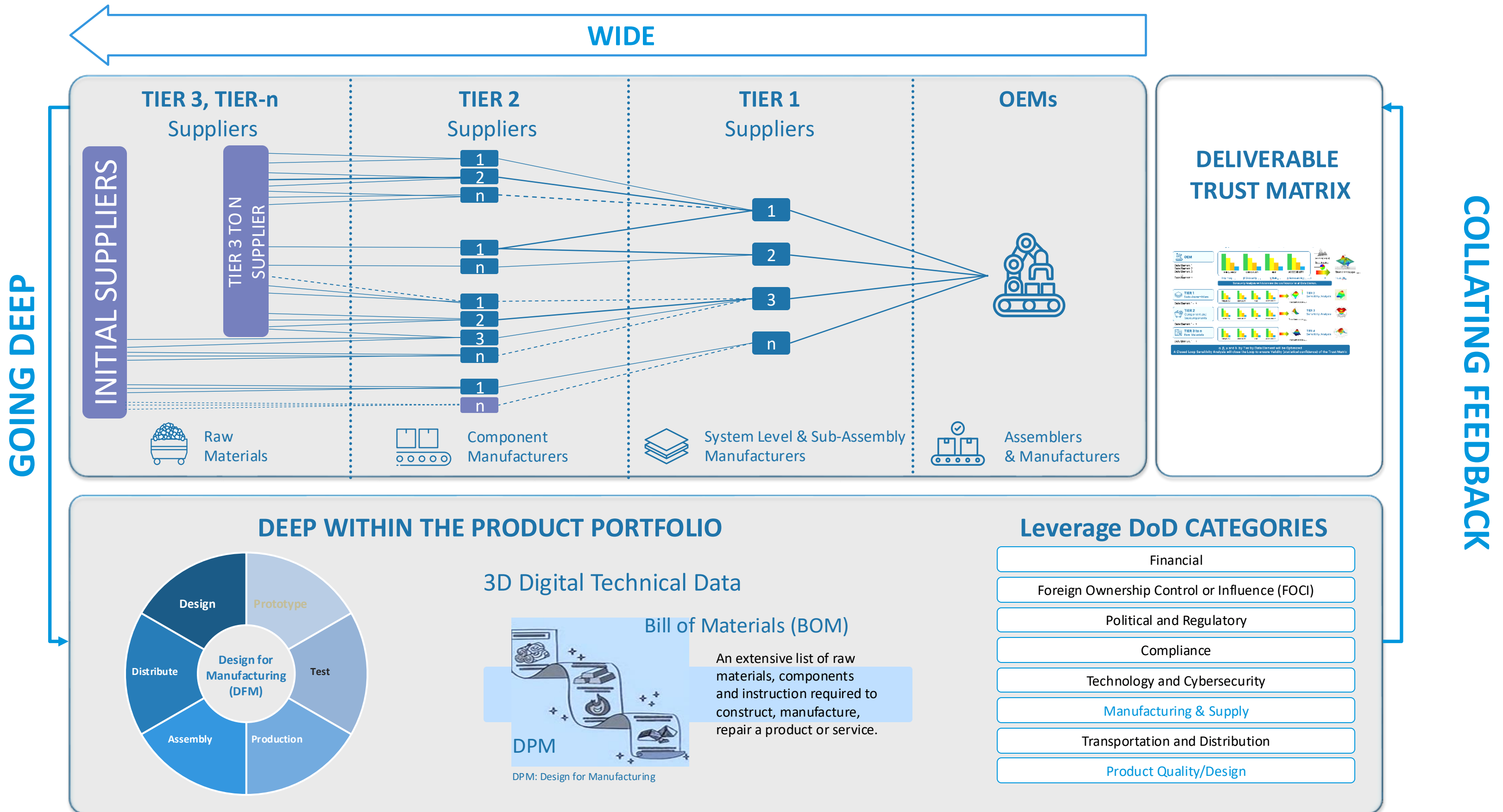


*Boeing, Dow, Lockheed, DLA, Wolfram Manufacturing
Met-L-Flo, Inc. Kent Displays*

*Sustainment Technologies, Resilinc, Everstream,
USAF / WPAFB, IPC Electronics, Connex*

*SCRM to perform statistical
and sensitivity analysis*

Building n-Tier Visibility

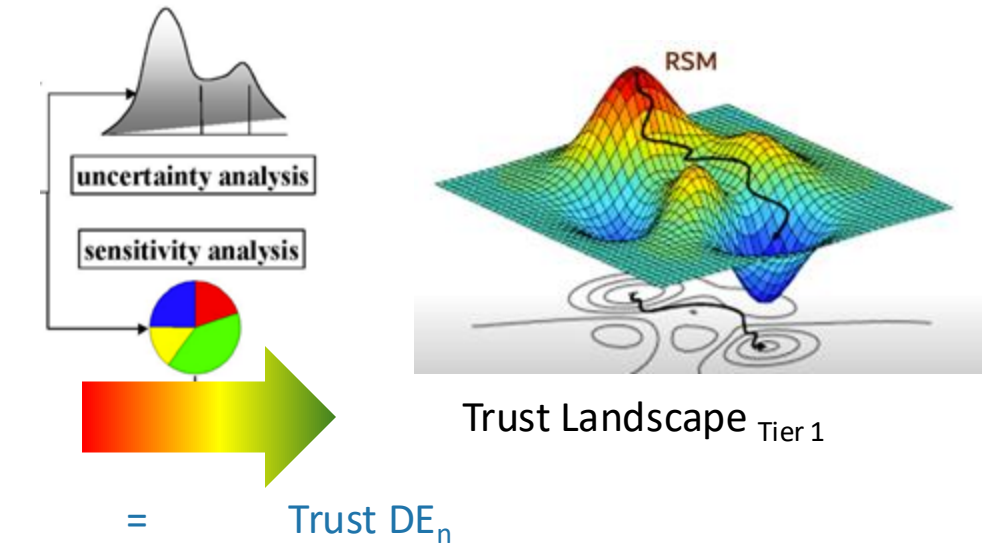
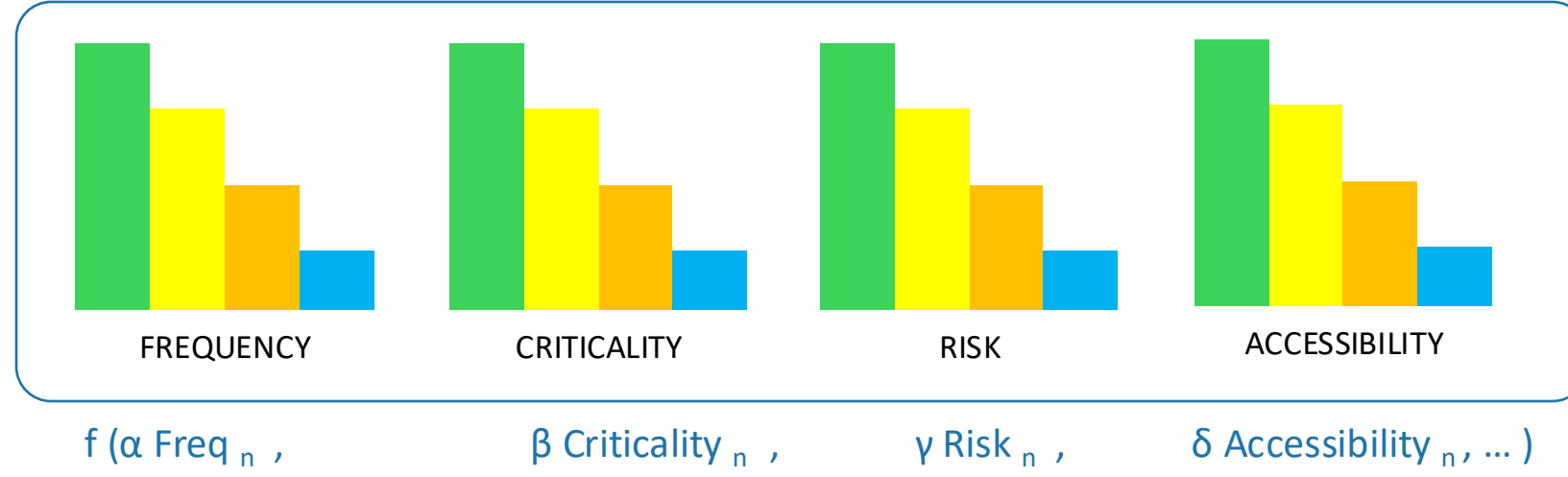


Creating Segmentation Visibility

Industry, Mechanical/Electrical/Electronics/Software

OEM

Data Element 1
Data Element 2
Data Element 3
...
Data Element n

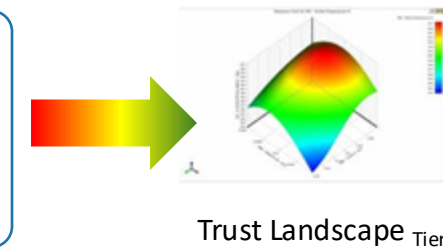
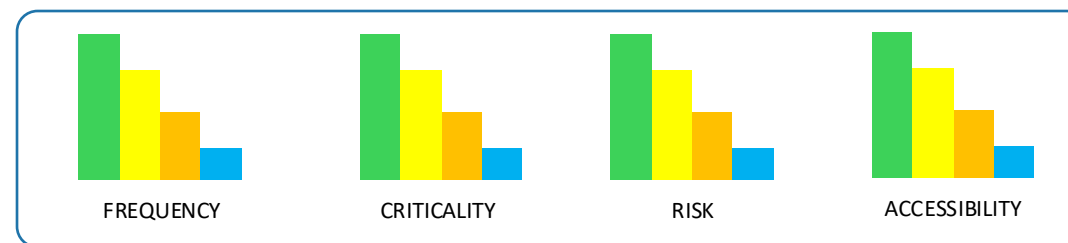


Sensitivity Analysis will determine the coefficients for all Data Element

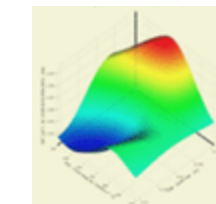
RSM: Response Surface Management

TIER 1
Sub-Assemblies

Data Element 1 - n

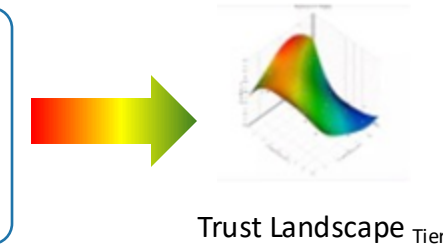
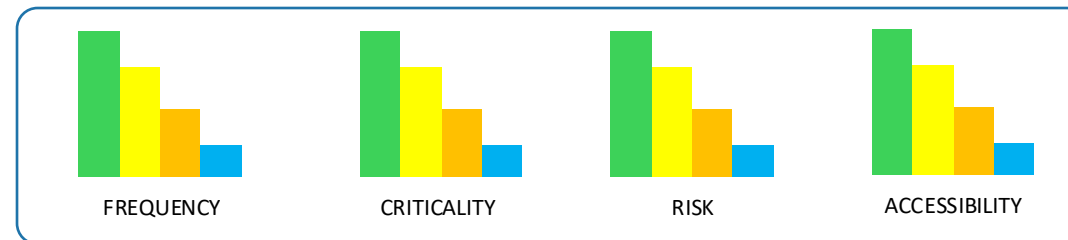


TIER 2
Sensitivity Analysis

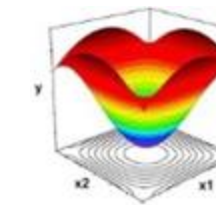


TIER 2
Component and Subcomponents

Data Element 1 - n

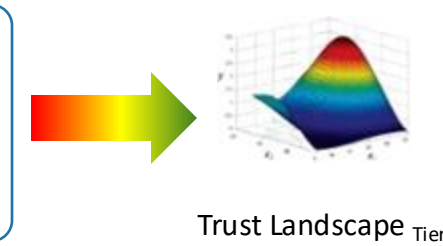
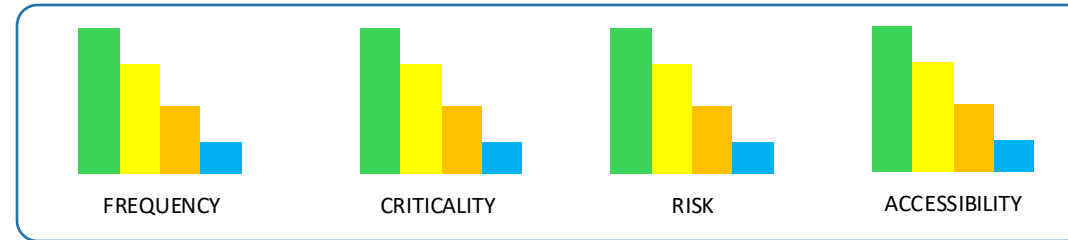


TIER 3
Sensitivity Analysis

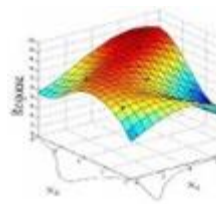


TIER 3 to n
Raw Materials

Data Element 1 - n



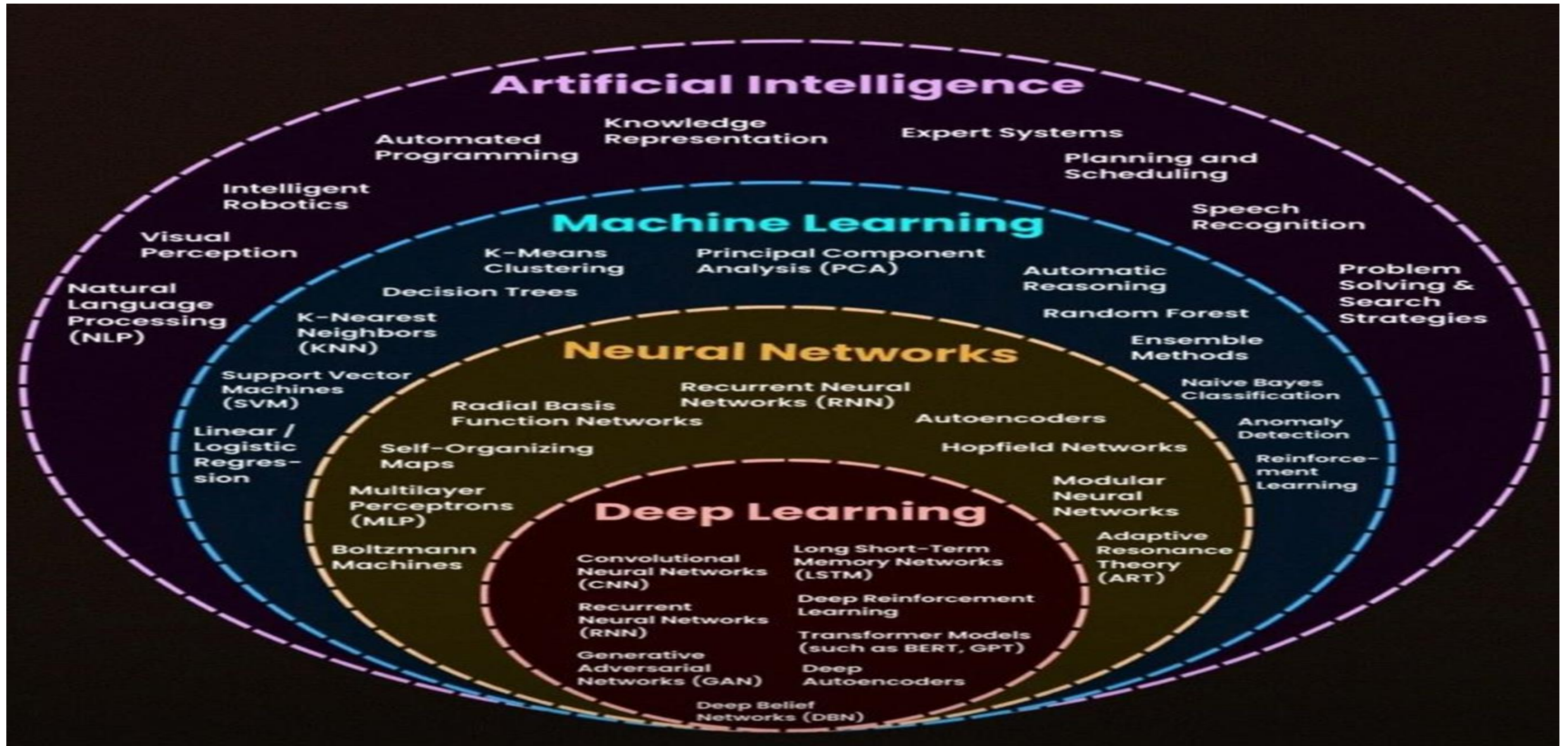
TIER 4
Sensitivity Analysis



α, β, γ and δ by Tier by Data Element will be Optimized

A Closed Loop Sensitivity Analysis will close the Loop to ensure Validity (statistical confidence) of the Trust Matrix

The Broad Spectrum of AI/ML and MORE.....



The World of AI and ML

- **Artificial Intelligence (AI):** sometimes referred to as machine intelligence, is intelligence demonstrated by machines. Artificial intelligence features machines or devices that have software that learns from experience, adjusts to new inputs and performs human-like tasks
- **Machine Learning (ML);** is a field of study in artificial intelligence concerned with the development and study of statistical algorithms that can learn from data and generalize to unseen data and thus perform tasks without explicit instructions.

[Here, programmers teach computers how they can learn to solve problems by themselves instead of teaching them how to solve problems.](#)

Wikipedia

OUR APPROACH TO LEARNING UNDER AI/ML...

Unsupervised machine learning is a branch of artificial intelligence (AI) that focuses on discovering patterns and relationships in data without the need for labeled examples. Unlike supervised learning, where the algorithm is trained using labeled data to make predictions, unsupervised learning algorithms work on unlabeled data to find meaningful structures or groupings.

Supervised machine learning is a type of machine learning where the model is trained on a labeled dataset (i.e., the target or outcome variable is known). For instance, if data scientists were building a model for tornado forecasting, the input variables might include date, location, temperature, wind flow patterns and more, and the output would be the actual tornado activity recorded for those days. Supervised learning is commonly used for risk assessment, image recognition, predictive analytics, fraud detection and comprises several types of algorithms.

We utilize Generative AI.....for two-way communication

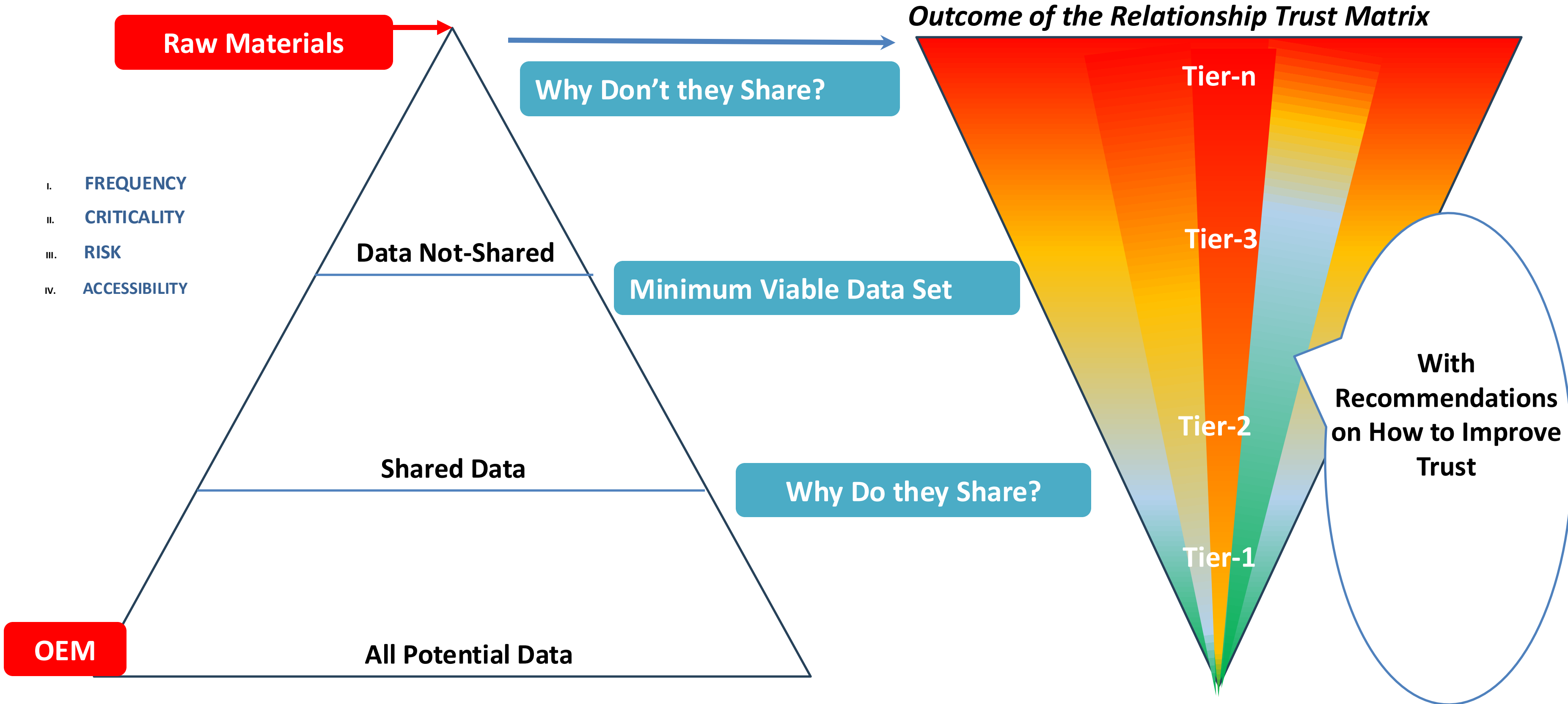
We utilize Reactive AI.....for classification/pattern recognition

We utilize Supervised ML.....for classification/clustering/regression

An Online, FREE, AI-ML Powered SC Trust Matrix Dashboard

Data Profile

Relationship Profile



AI-ML Powered SC Trust Matrix Advantage

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Potential Targeted Trust Metrics/Benefits

- 1. Cost Reduction:** Reduction in operational costs: 15-20% reduction
- 2. Speed of Execution:** Faster decision-making and execution: 20-25% increase
- 3. Increased Revenue Growth:** due to improved efficiency and trust: 10-15% increase
- 4. Operational Readiness and Reliability:** in supply chain operations: 10-15% improvement
- 5. Stakeholder Engagement | Satisfaction among stakeholders:** 80% engagement rate for focus teams; 10% completion rate for surveys
- 6. Positive Sentiment and Emotional Analysis Scores:** Sentiment scores > 5 on a 0 to 10 scale.
- 7. Psychological Safety Score Increase:** Scores > 5 on a 0 to 10 scale.
- 8. Cognitive Diversity Scores Increase:** Scores > 5 on a 0 to 10 scale.
- 9. Quality of Interaction Improvement Increase:** Scores > 5 on a 0 to 10 scale.
- 10. 3D Technical Data Exchange Reduction in time and increased clarity in data exchange Increase:** 20% time reduction; 20% increase in information clarity.
- 11. Machine Readability & Traceability Increase:** 20% increase in readability and traceability.

Potential Benefits Derived from Improving Trust

- When Trust is present, according to Stephen Covey....
 - *Costs to manage the Supplier-Buyer Relationship Decrease*
 - *The Rate at which Activities are accomplished is Accelerated*
- From the SCRM Consortium's book: Supply Chain Risk Management; An Emerging Discipline
 - *In Supply Chain and Risk Management, Time is Money and Speed is Life*
- From the SCRM Consortium.....via exemplar clients
 - **Trust is the New Math...**
 - *Supply Chain Process Maturity + Risk Management Excellence + Balanced Scorecard*
→ **Equates to Improved Resiliency**
 - *When costs decrease and decision-making speed increases,*
that **Equates to Differentiation, Top-Line Revenue Growth and Strategic Advantage**

LAUNCHING in 3rd QTR 2025





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