The Coordination and Collaboration Process within Committees in the Information Age

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Motivation

- DoD Grappling with C2 and Organization Issues Especially In MIO Operations

- Teams In order To Collaborate form their own "Space Of Constraints" Whether They Act In The Physical, The Virtual Environment Or In Both

- **Which Is The Dynamic, In Terms Of Time, Collaboration Process That Exists Within Committees With Wluidic Participation Which Operate In Both The virtual And Physical Environment?**

Prior Research

- Team Research In General
  - Teams That Operate in the Physical Space (Such As Cliques by Poran & Sabastien, 1998; and Teams in General by Salas et. al., 1992) or Teams That Operate In the Virtual Space (Gibson & Cohen, 2003; Yoo, 2001) and Examined Coordination and Collaboration Within Committees Using the Majority Rule (Bordetsky, 1996; Miller & Page, 2007).
  - Teams' Decomposition Applies When Complex Problems Arise (e.g. Swarm Groups as Proposed by Arquilla, J. & Ronfeldt, D, 2000).
- Current Campaign of Experimentation
  - TNT's Series Of Experimentation (Souda Bay,Crete- San Francisco e.t.c)
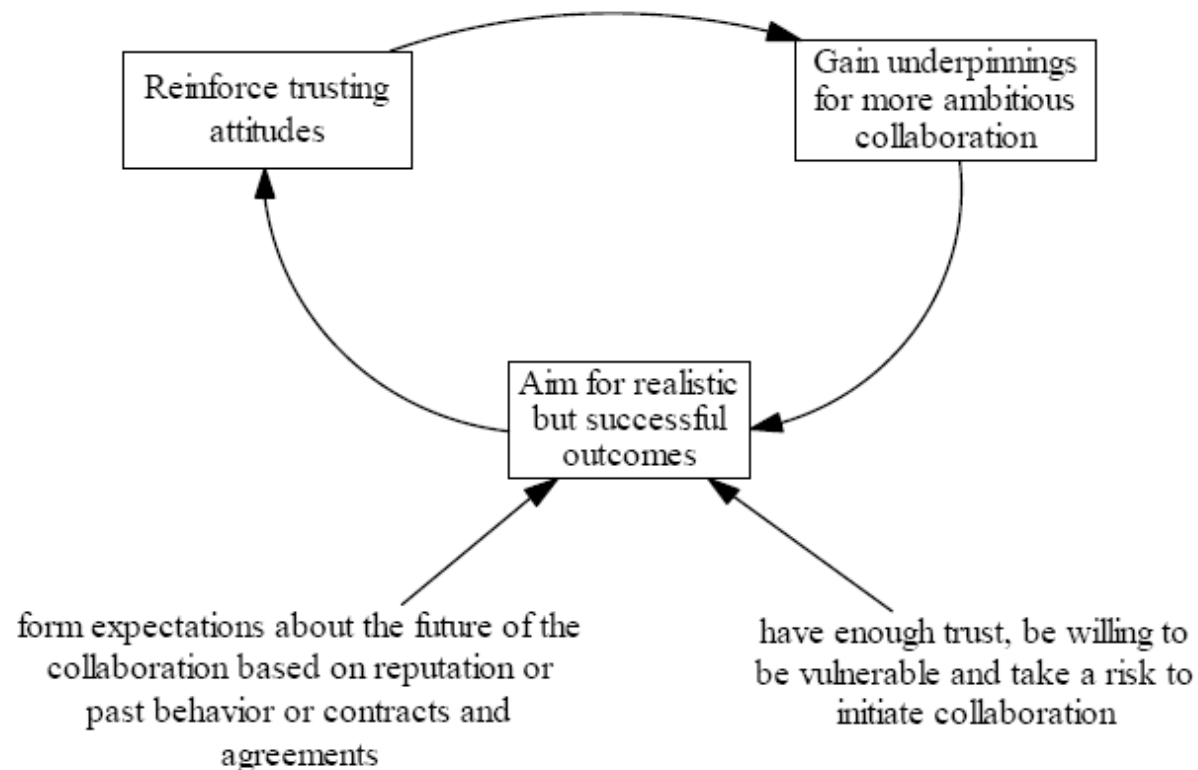
Research design
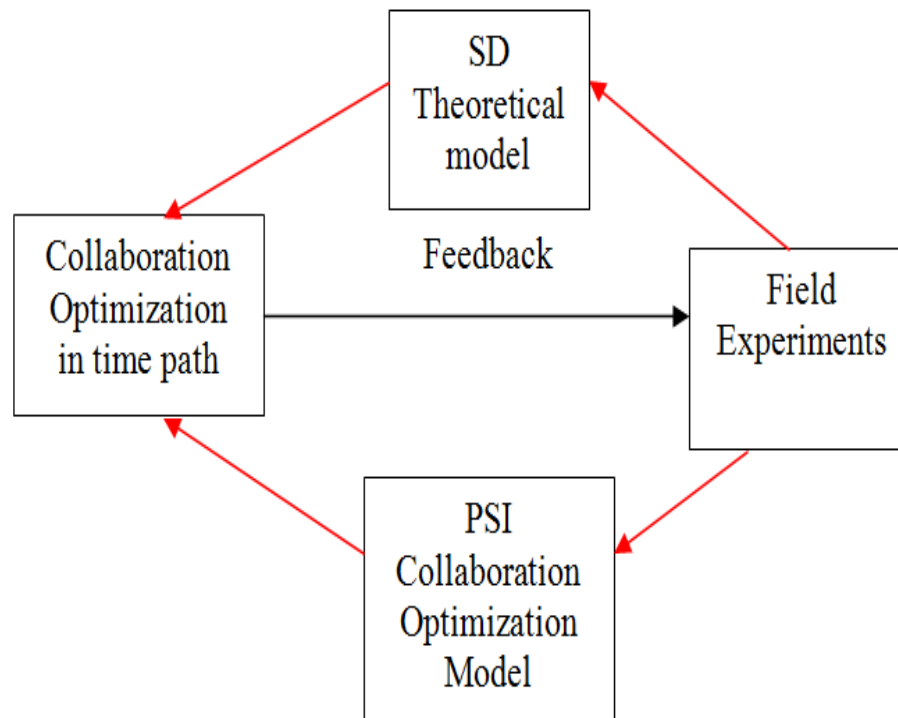
Theoretical Model Basis
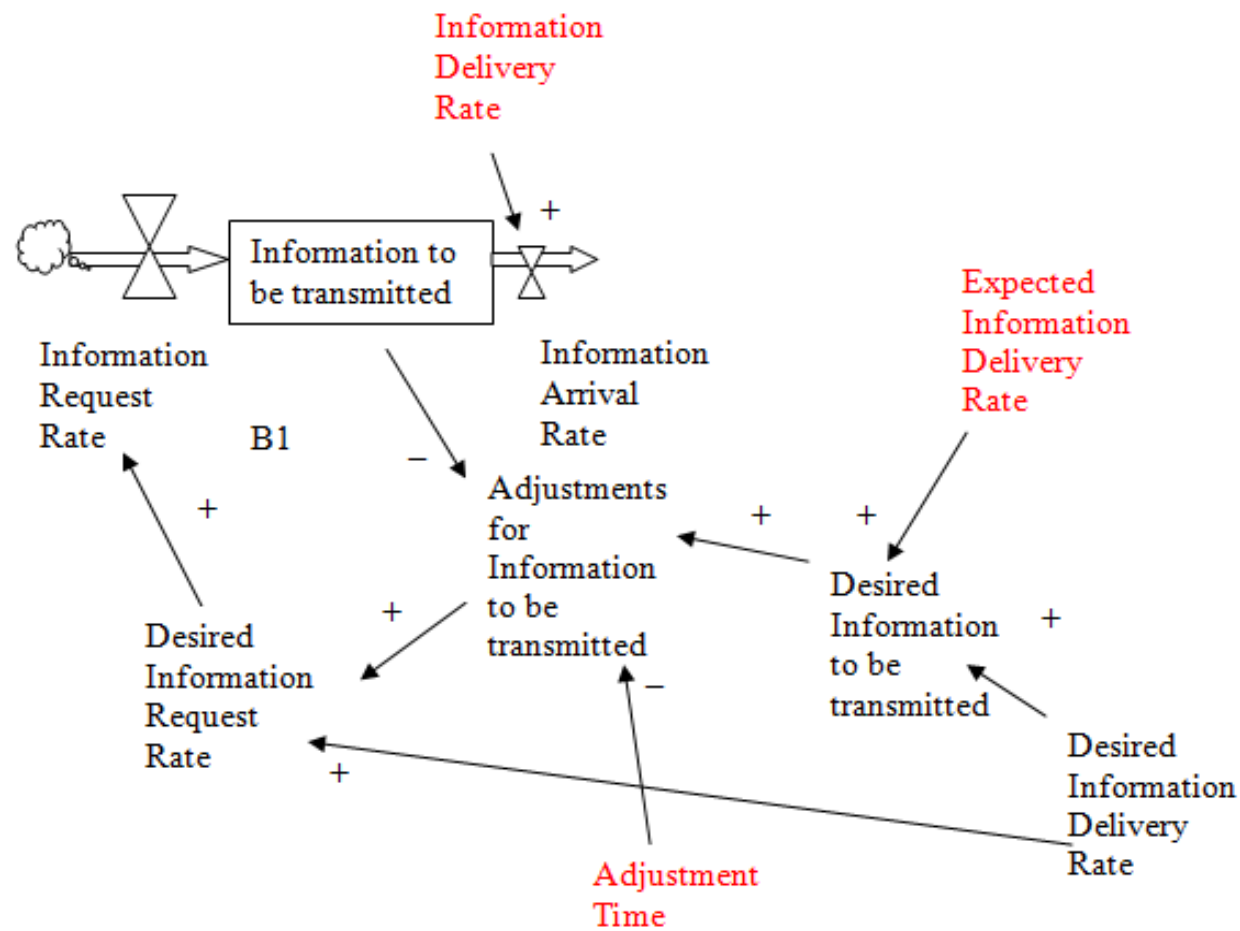## Interactions Among Supply Chain Partners
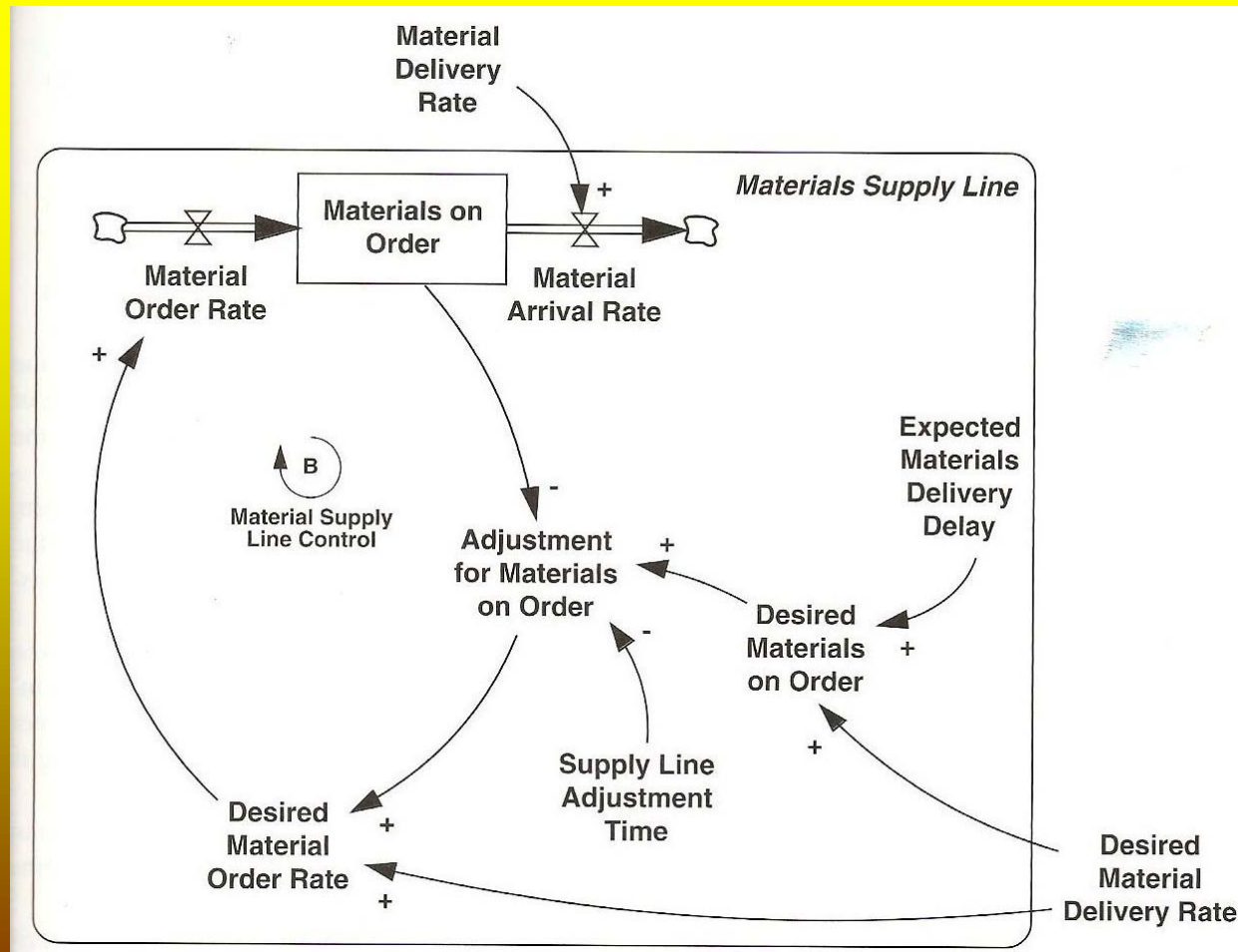
Theoretical Model Basis
## Trust Building Cycle

Theoretical Model of Collaboration

Field Experimentation

- Field Experimentation With Participant From Nato Countries
- Hypothesis Testing:
  - Hypothesis 1: If Trust Among Members Of a Committee Increases, Then The Members Migrate From The Physical To The Virtual Environment More Often.
  - Hypothesis 2: Information Exchanges Faster When Members Migrate From The Physical To The Virtual Environment.
  - Hypothesis 3: The Need For Information Increases Among Members That Communicate In the Virtual Environment

Collaborative Process with Multi Criteria tool (Adapted from Bordetsky (1996))
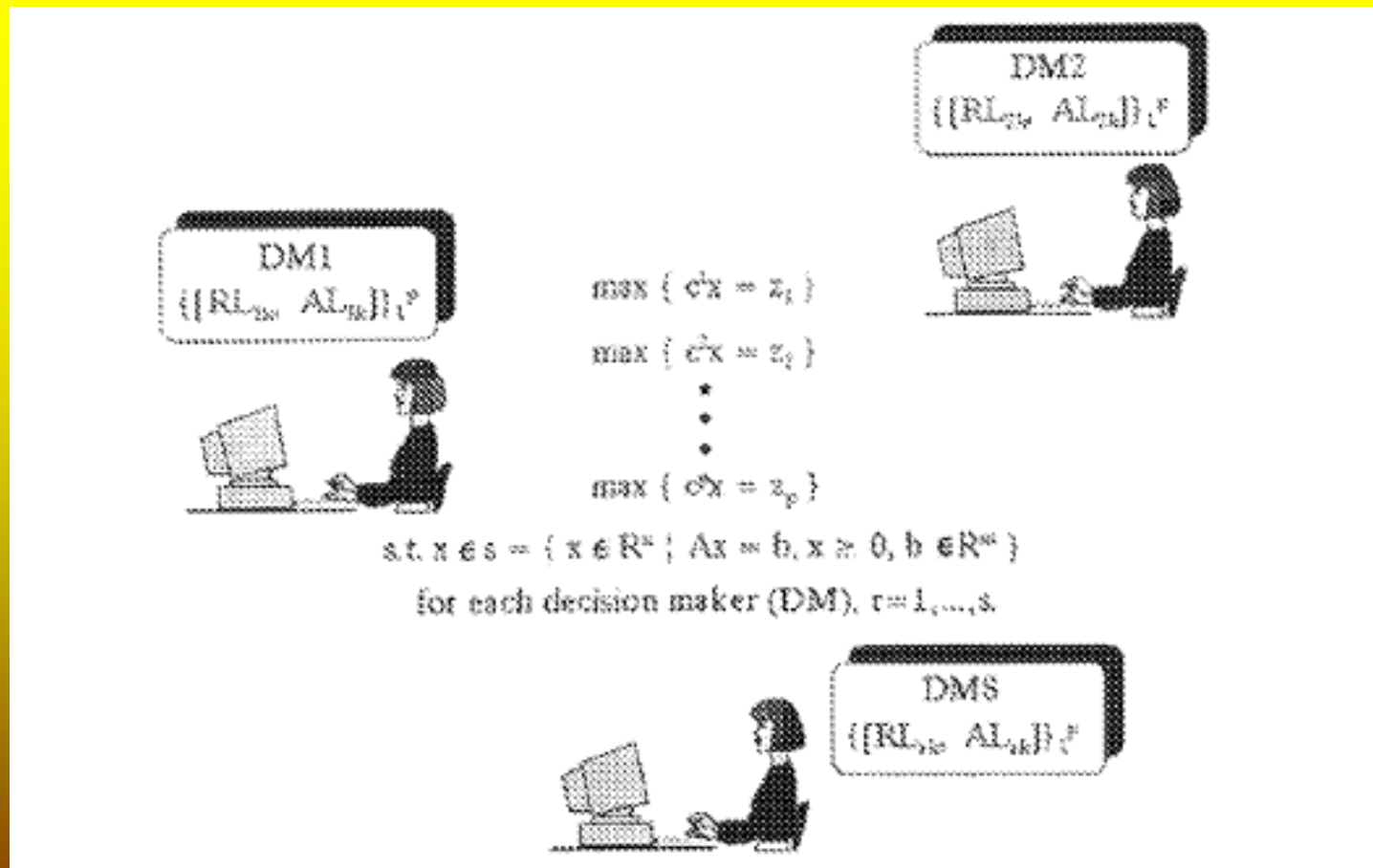
Conclusion

- A Theoretical Model Of Collaboration Is Generated Based On Literature. Building Upon Variables and Their Theoretical Derived Correlations a System Dynamics Model is Generated In Order To Examine The Collaboration Process In A Time Path.

- The Second Step Involves Field Experimentation To obtain The Coordination Process and The Factors That Affect Coordination.

- The Multivariate Nature Of This Problem Is Examined With The Parameter Space Investigation (PSI) Method of Multi-Criteria Optimization (Statnikov, 2002)

  - Temporal Equilibrium States of The Coordination

    Process Using Data From The Field Experiments.

  - "Docking"

Questions?