Sustainability Models for Digital Preservation Federations

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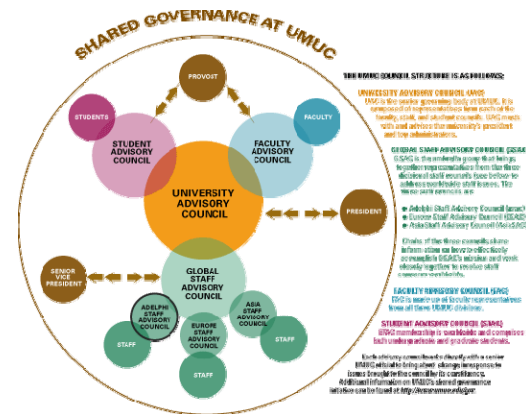Georgia Institute of Technology
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DigCCurr2007   SDSC **SAN DIEGO SUPERCOMPUTER CENTER** UC San Diego   Georgia Institute of Technology Library and Information Center

Governance Models

- **National Programs**
  - Top Down Governance
  - Governmental/Non-Governmental
- **Virtual Organizations**
  - Bottom-Up Governance
    - International/National
    - State/Regional
    - Local
- **State or Institutional Programs**
  - Universities
  - State Government
- **Local Programs**
  - Libraries
  - Business Information (The As – HIPPA, FIRPA, and Os – SARBOX)

Digital Preservation Federations

- **International**, i.e.
  - International Internet Preservation Consortium (IIPC)
    - state, national libraries, private, non-governmental agencies preserving global Internet content

- **National**, i.e.
  - U.S.: LC/NDIIPP Partnerships – Chronopolis (SDSC)
  - Other nations: National Library/Archives model programs, i.e. Australia, Canada, France, Germany, Italy, Netherlands, U.K.

- **State/Regional**, i.e.
  - Florida Center for Library Automation (FCLA) – Digital Archive
  - Univ. California Digital Library's (CDL) Digital Preservation Repository
  - State Library of Virginia's Archiving the Web Program

- **Local**, i.e.
  - GT: SMARTech IR → MetaArchive Preservation Network
  - GT IR Harvested by Statewide IR: Galileo Knowledge Repository

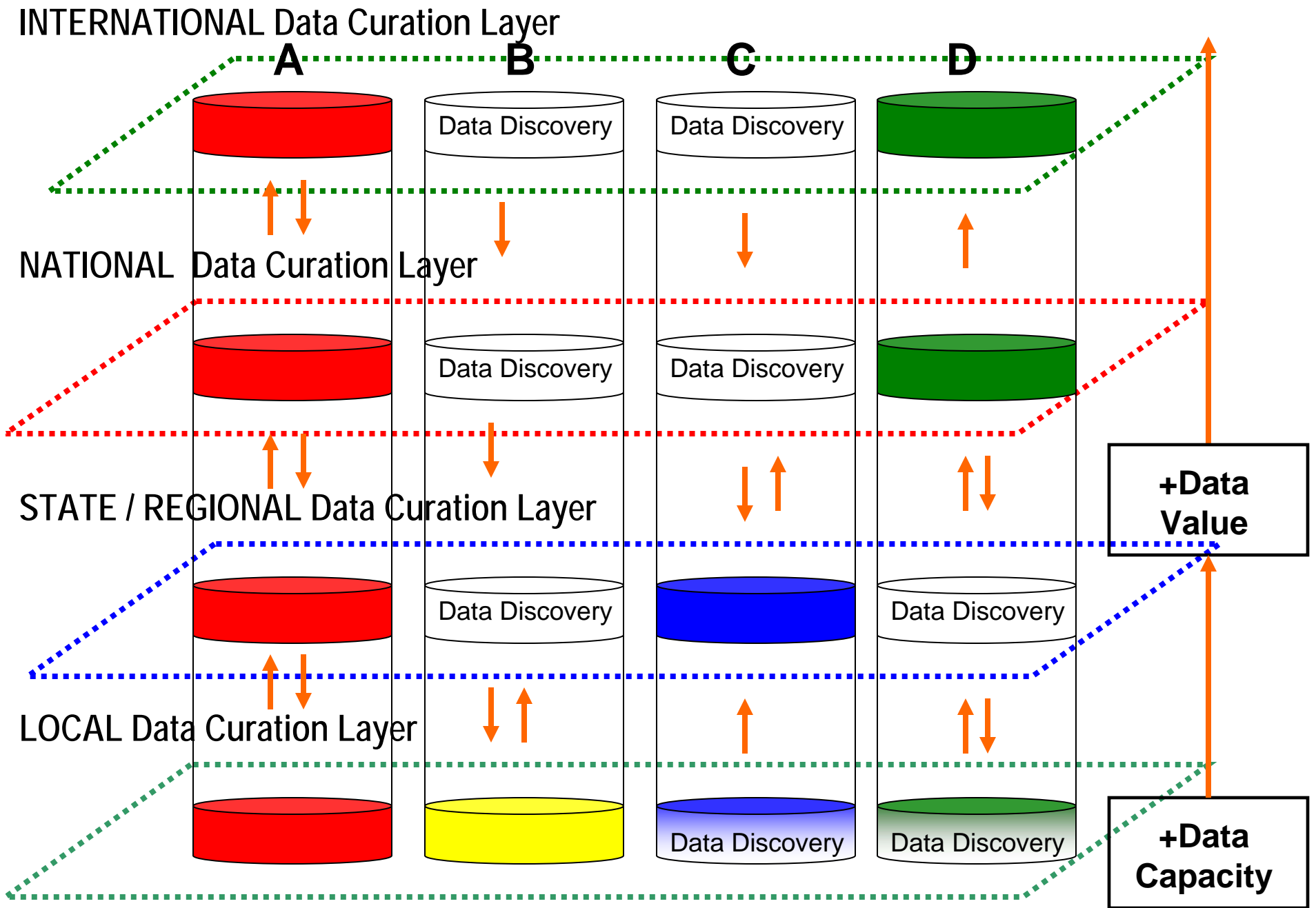# Non-Profit – Non-Governmental

Examples:

- **LOCKSS Alliance**
  - Institutional Sponsorship (Stanford) – Membership driven
- **DSpace Foundation**
  - 501 (c)(3)
- **MetaArchive Cooperative / Educopia Institute**
  - Institutional and 501(c)(3)

Models of Sustainability

- ## Organizational
  Strategies that advance collaborations between org. units, to perform a program's functions and achieve a particular goal

- ## Technology
  Strategies that advance collaborations to create, disseminate, and maintain technologies

- ## Economic
  Strategies that generate revenues and investments necessary to support digital libraries

- ## Collections
  Strategies used to ensure that defining qualities characterizing information objects and collections persist

INTERNATIONAL Data Curation Layer

A   B   C   D

Data Discovery   Data Discovery

NATIONAL Data Curation Layer

Data Discovery   Data Discovery

STATE / REGIONAL Data Curation Layer

Data Discovery   Data Discovery

LOCAL Data Curation Layer

Data Discovery   Data Discovery
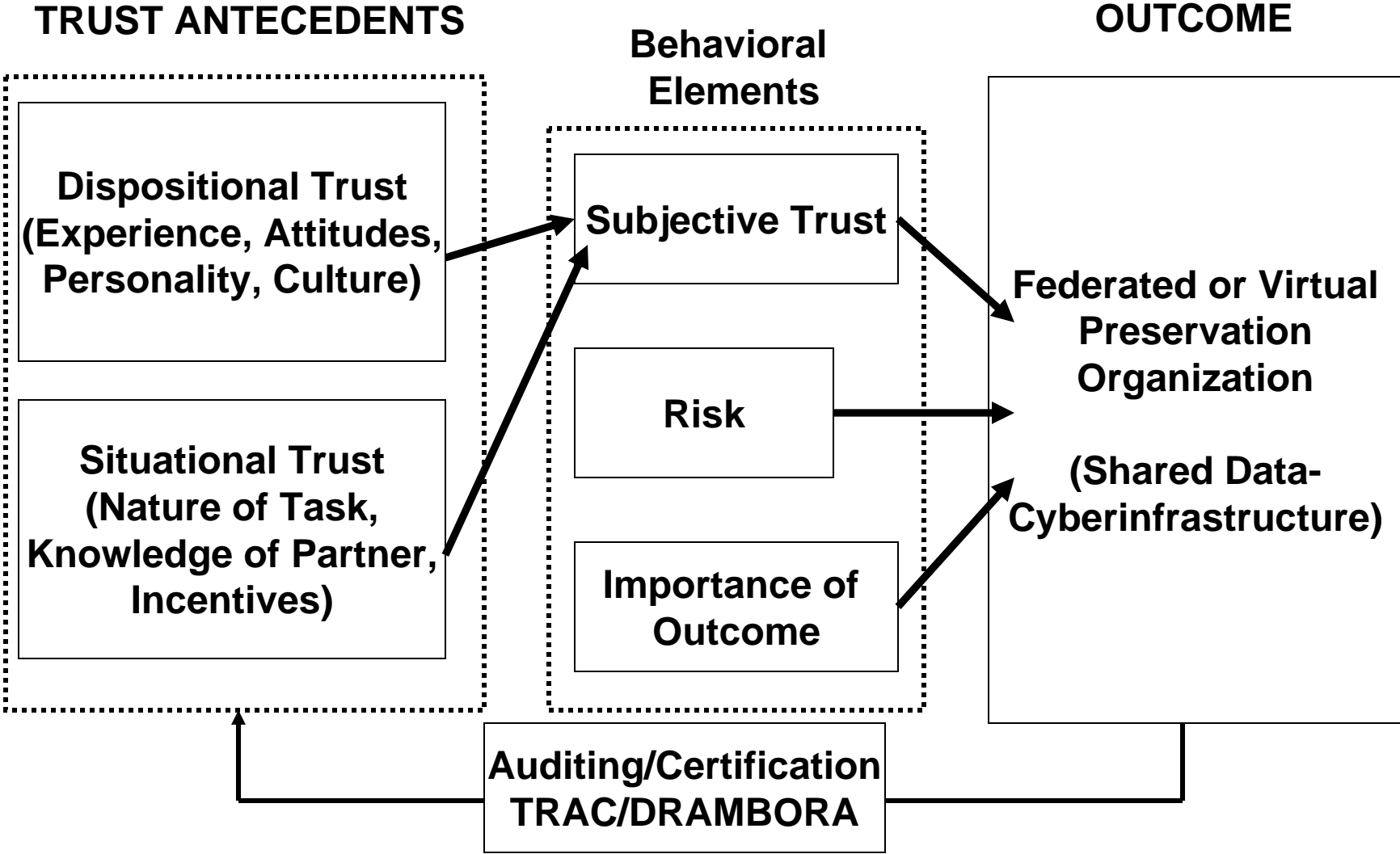
+Data Value

+Data Capacity

Relationships through Trust

- **The Rise of Virtual Organizations**
  - Nature is to operate across physical institutional governance
  - Shared Resources
    - Grid Organizations
- **Formalized Trust (Maister, Green, Galford)**
  - Credibility
  - Reliability
  - Intimacy
  - Self-Interest
- **Legal Building Blocks**
  - 501 (c)(3) – U.S.
  - MOU – Memorandum of Understanding
  - SLA – Service Level Agreement

Formalized Trust Relationships

TRUST ANTECEDENTS

Behavioral Elements

OUTCOME

Dispositional Trust (Experience, Attitudes, Personality, Culture)

Situational Trust (Nature of Task, Knowledge of Partner, Incentives)

Subjective Trust

Risk

Importance of Outcome

Federated or Virtual Preservation Organization

(Shared Data-Cyberinfrastructure)
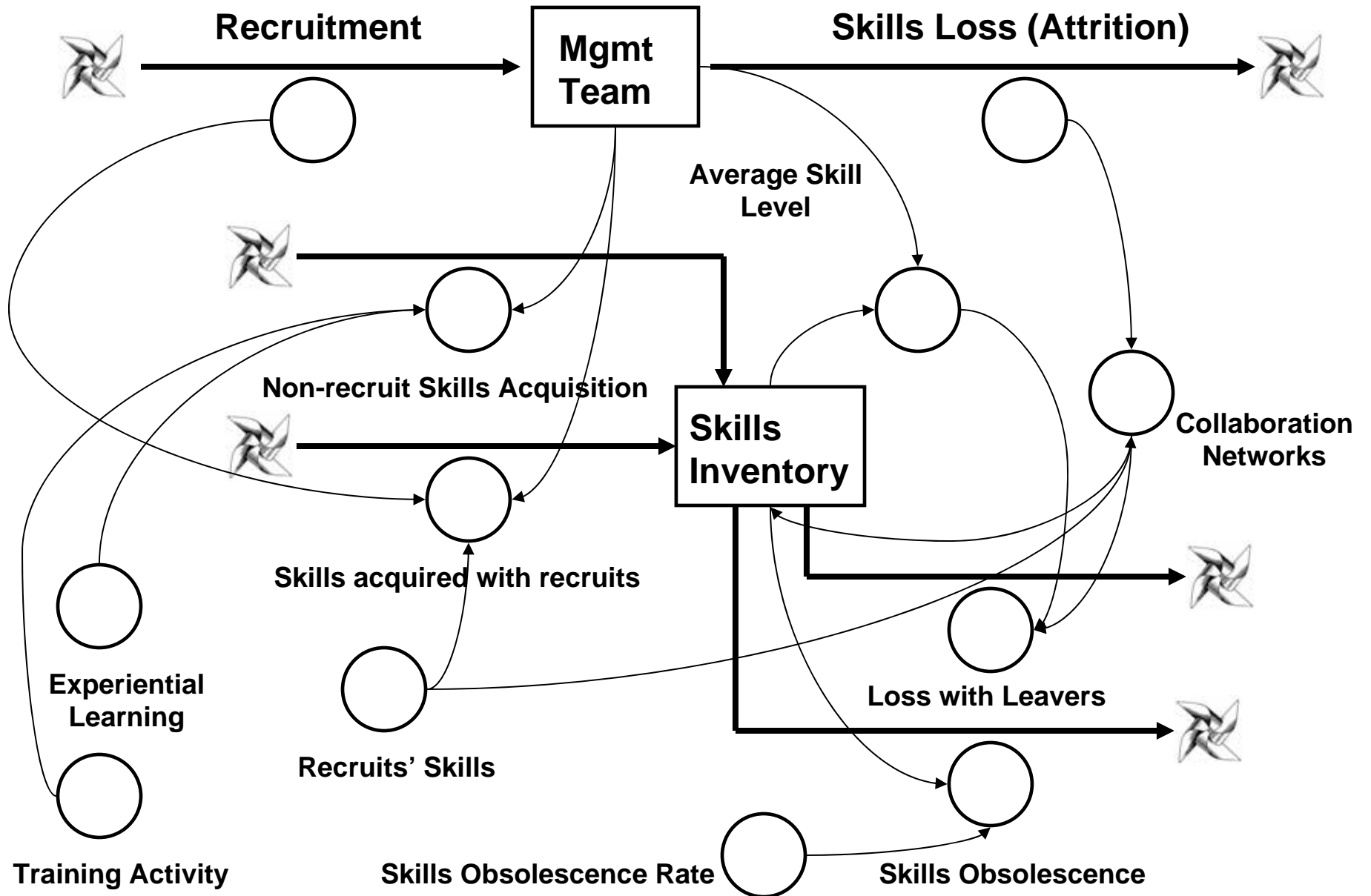
Auditing/Certification TRAC/DRAMBORA

Skills for Digital Curators

- **Build Virtual Organizations & Relationships**
  - Possible outsourcing of data center
  - Facilitate tech. work, R&D, fundraising, standards-building
- **Engage and Solicit Partners**
  - Collections – Active | Passive
  - Technical Data Centers
  - High Performance Computing
  - Digital Libraries
- **Facilitate Partner Roles & Responsibilities**
  - Mgmt. of Virtual Organizations
  - Project Management Skills (PMI)
  - Knowledge Management – Internal/External
- **Technical Language Skills**
  - Industry Can be Helpful
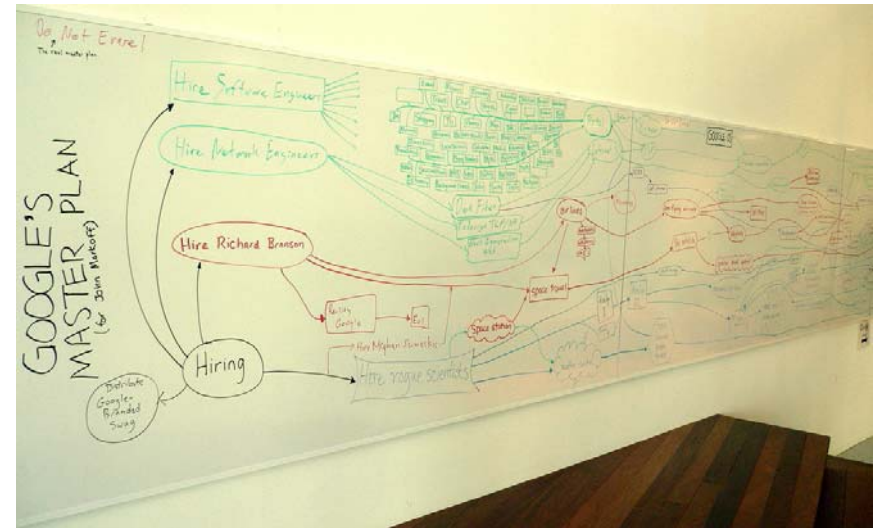- **Connectors (Gladwell - Tipping Point)**

Digital Curation Management Lifecycle

Recruitment

Mgmt Team

Skills Loss (Attrition)

Average Skill Level

Non-recruit Skills Acquisition

Skills Inventory

Collaboration Networks

Skills acquired with recruits

Experiential Learning

Loss with Leavers

Recruits' Skills

Training Activity

Skills Obsolescence Rate

Skills Obsolescence

CHALLENGES

- **Power**
  - Energy Requirements for Mass Storage

- **Interoperability**
  - Hardware
  - Governance - VO

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QUESTIONS

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