Institute for Cyber Security

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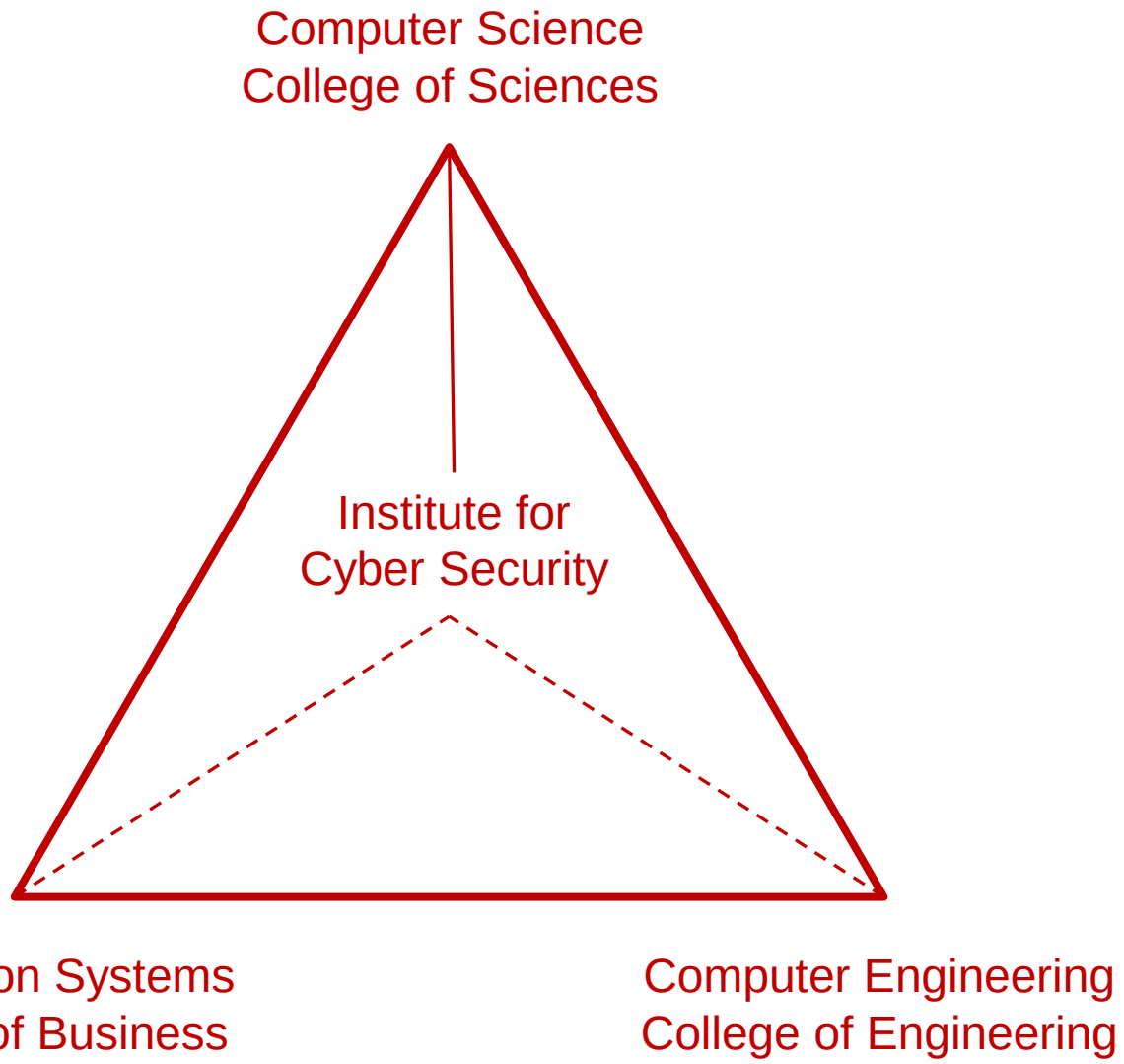
UTSA Cyber Security Programs

Hallmarks
- **Diversity**
- **Maturity**
- **Excellence**



UTSA Cyber Security Programs

- Diversity
  - 3 Departments across 3 Colleges
  - Core security faculty plus numerous collaborators
  - World class labs: FlexCloud, FlexFarm
  - Research, Education, Workforce development, Cyber competitions
  - Hispanic minority serving institution
- Maturity
  - Major and sustained push in cyber security since 2000
  - Established degrees and concentrations
  - NSA CAE for Education and for Research
- Excellence
  - Rated number 1 in the country by a HP sponsored study in 2013
  - Creating first BS degree in Cyber Security in USA to be offered by a research intensive CS Department
  - Effectively a dual major in CS and Cyber Security
  - Excellent placement record for students at all levels

ICS Philosophy

Systems

Applications **Technologies**

Foundations

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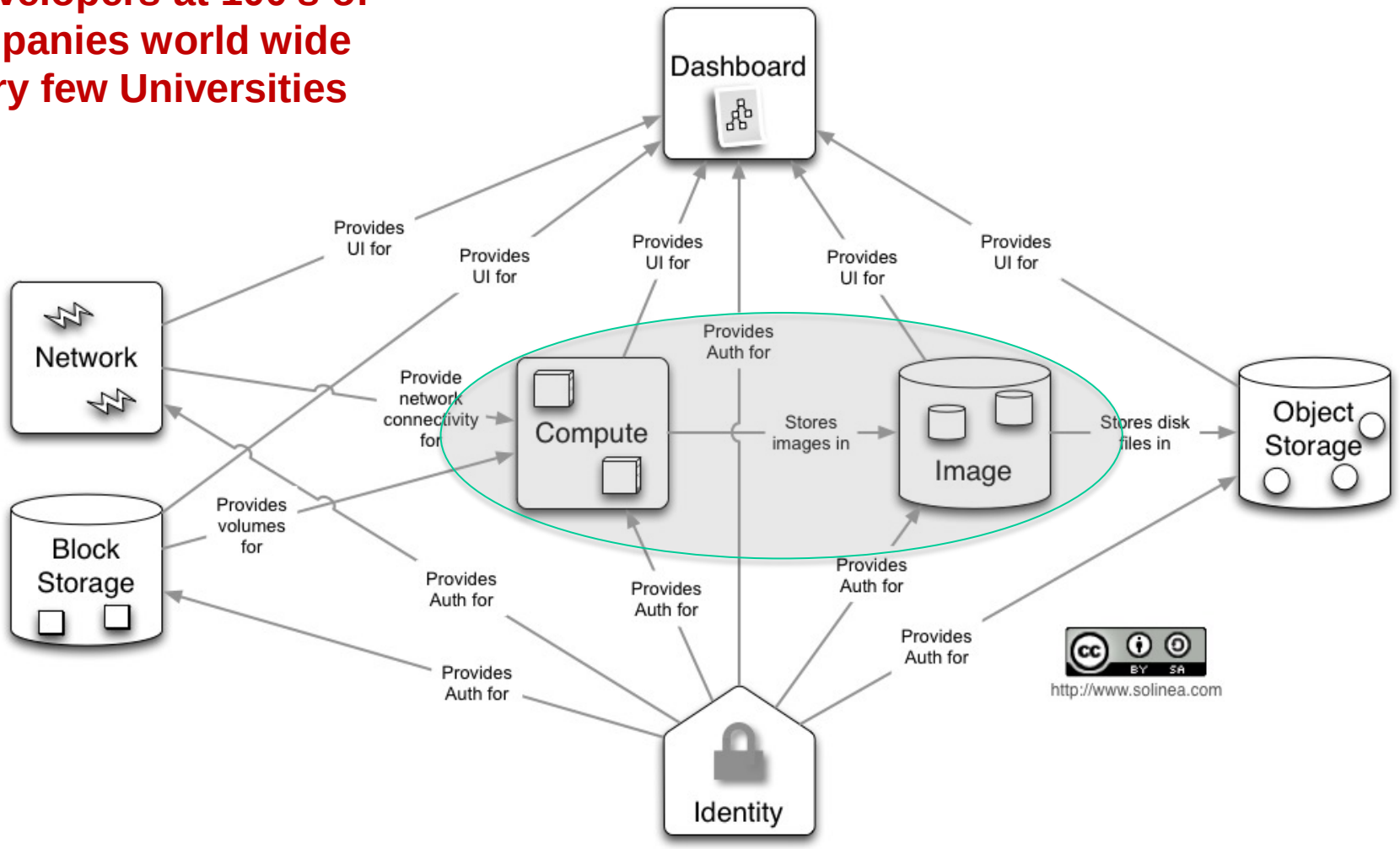
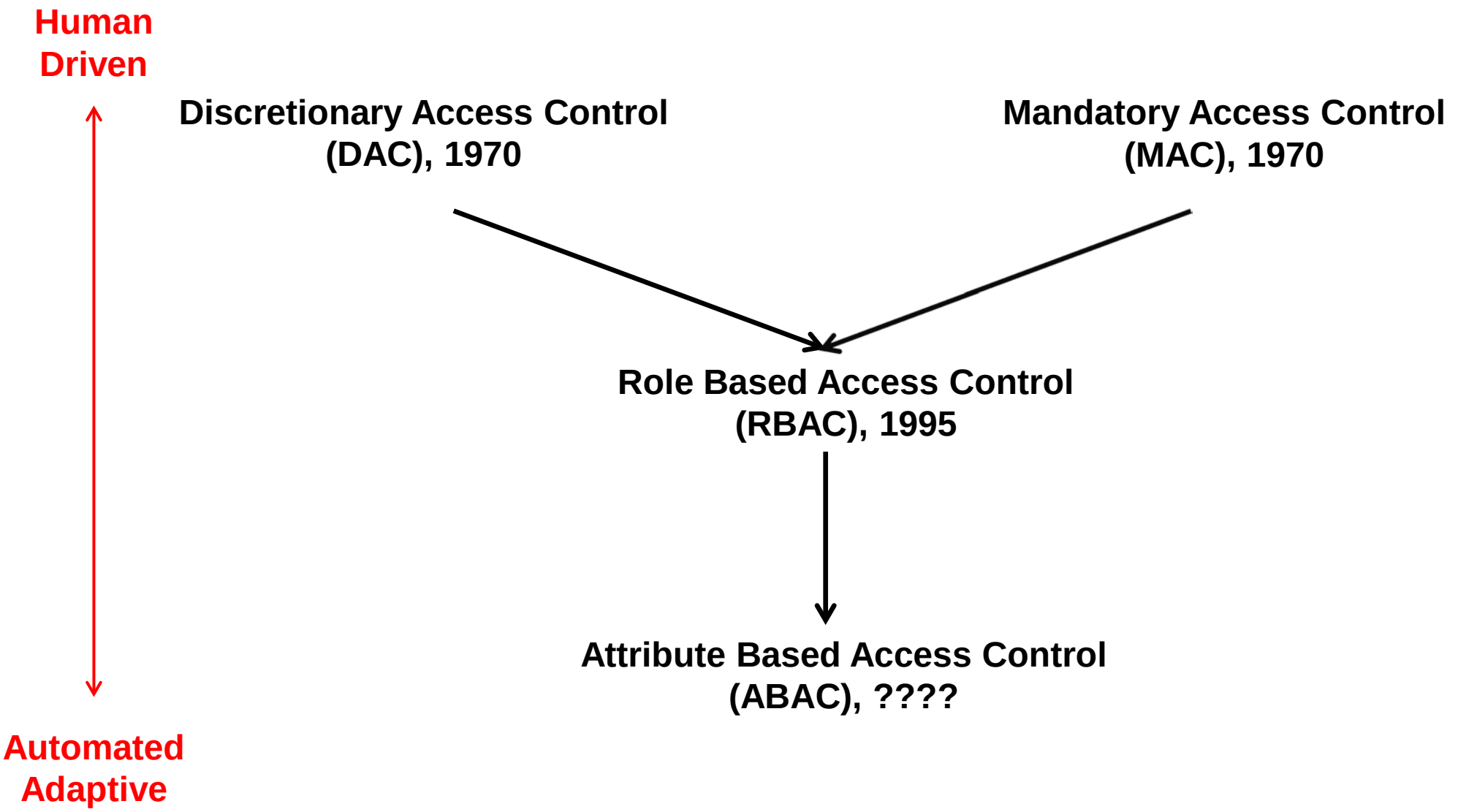
OpenStack Cloud Platform

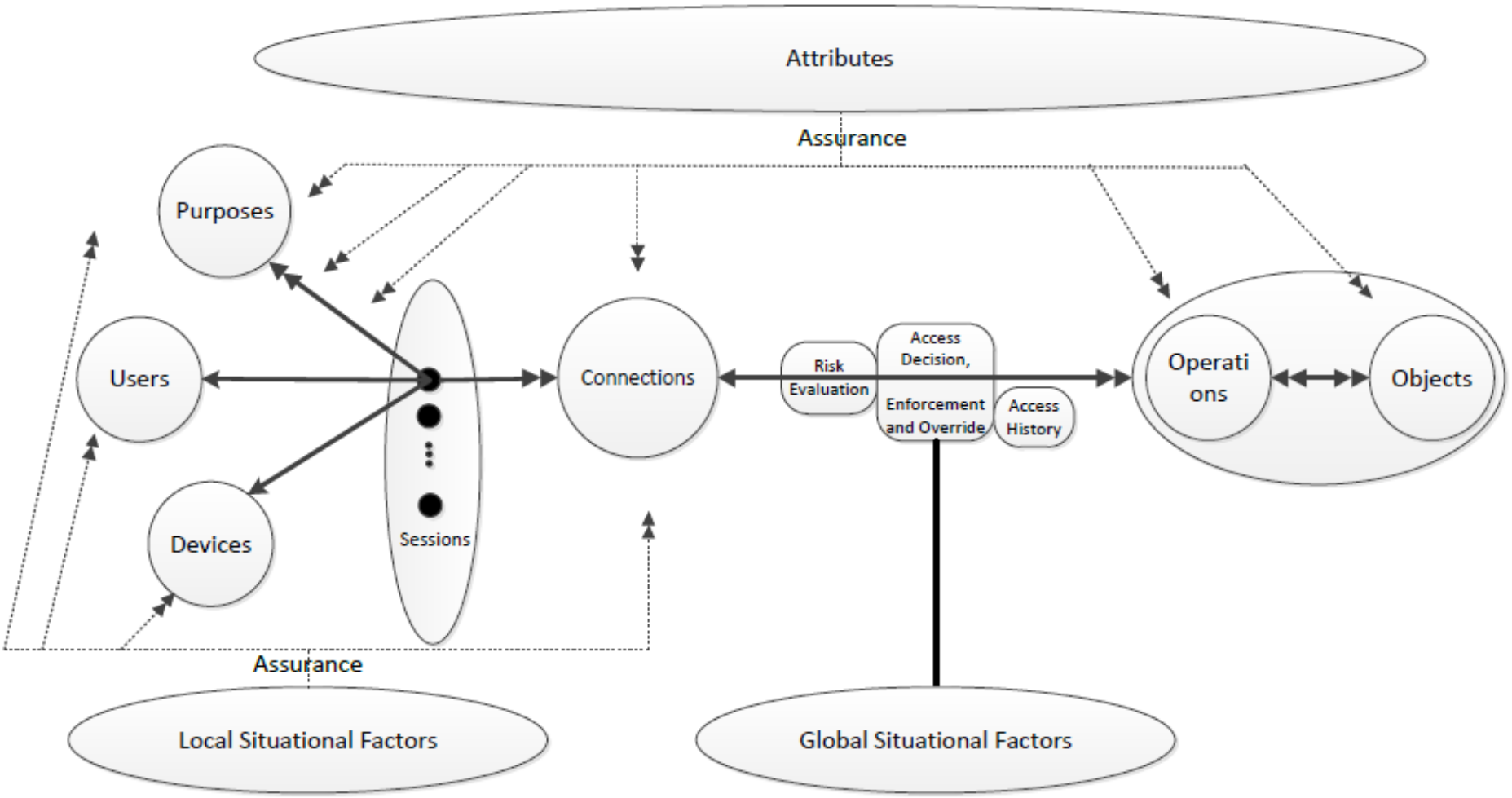
- **Developers at 100's of companies world wide**
- **Very few Universities**



Access Control



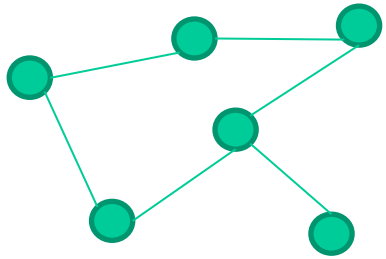
Risk Adaptive Access Control (RAdAC)



Provenance Aware Systems

Access and Usage Control
of Data and its Provenance

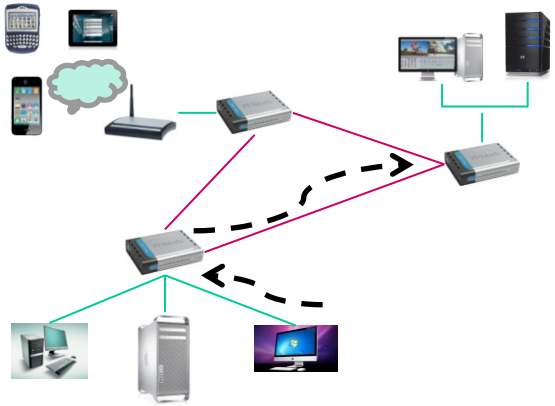
Data Trustworthiness
(e.g., sensor networks)



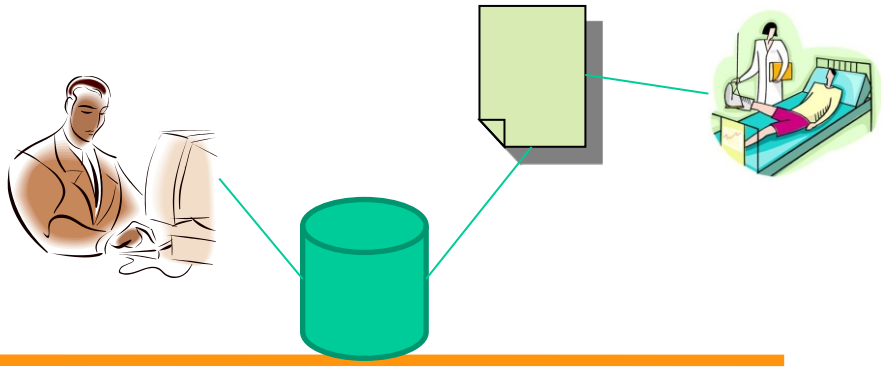
Data

Provenance

Data Forensics
(e.g., SIM tools)



Data Privacy
(e.g., track hospital records)



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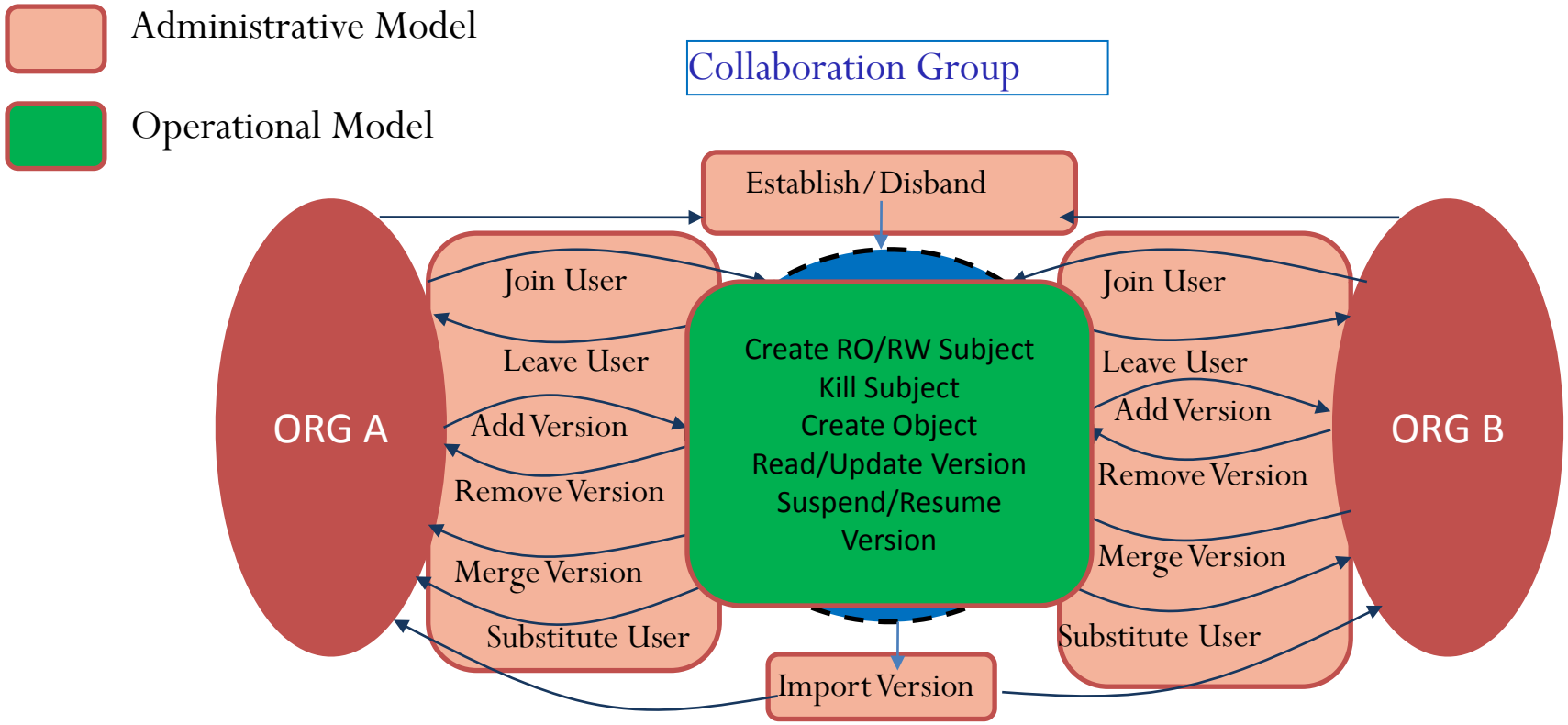
World-Leading Research with Real-World Impact!

Group Centric Information/Resouce Sharing



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Other Research Areas

- Social network and social computing security
- Integrated models for access control, compliance and forensics
- Smart grid security
- Malware models and analysis
- Botnet detection and mitigation
- ……