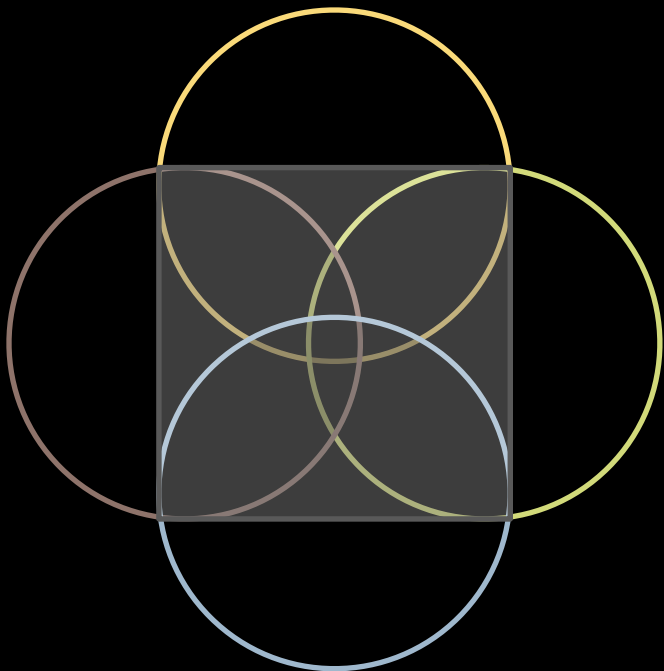


# Usability, User Centered Design, and Process Standards

Brian Stanton



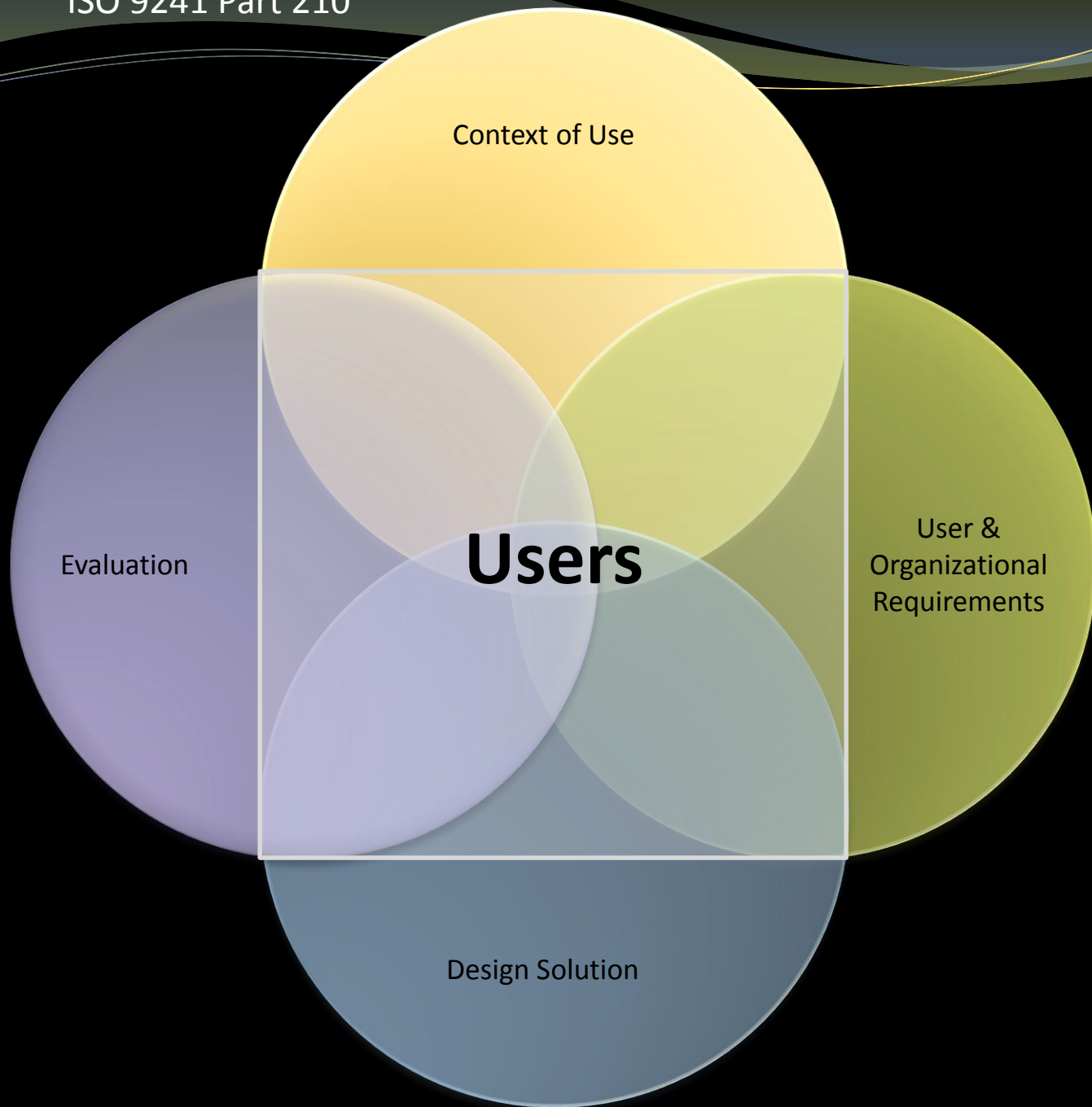
**NIST**  
National Institute of  
Standards and Technology  
U.S. Department of Commerce

# Improving performance

- Make sure the system supports the users' tasks and goals
- Measure Effectiveness, Efficiency, and User Satisfaction
  - Effectiveness – quality
  - Efficiency – Timing
  - User Satisfaction – fulfillment, no frustration, enjoyment, contentment

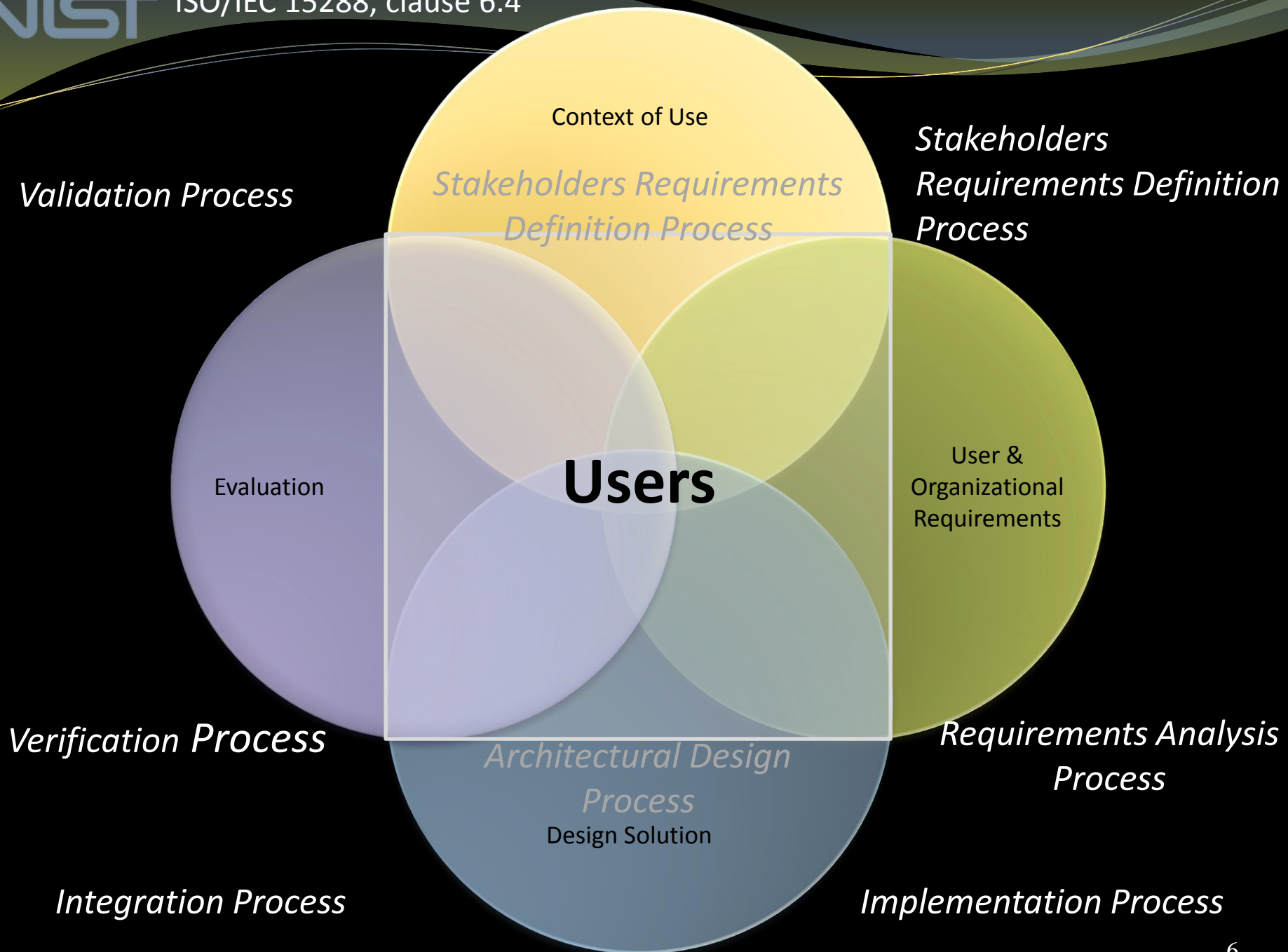
# User Centered Design

- ISO 9241 Part 210 Ergonomics of human-system interaction part 210:Human-centred design for interactive systems.



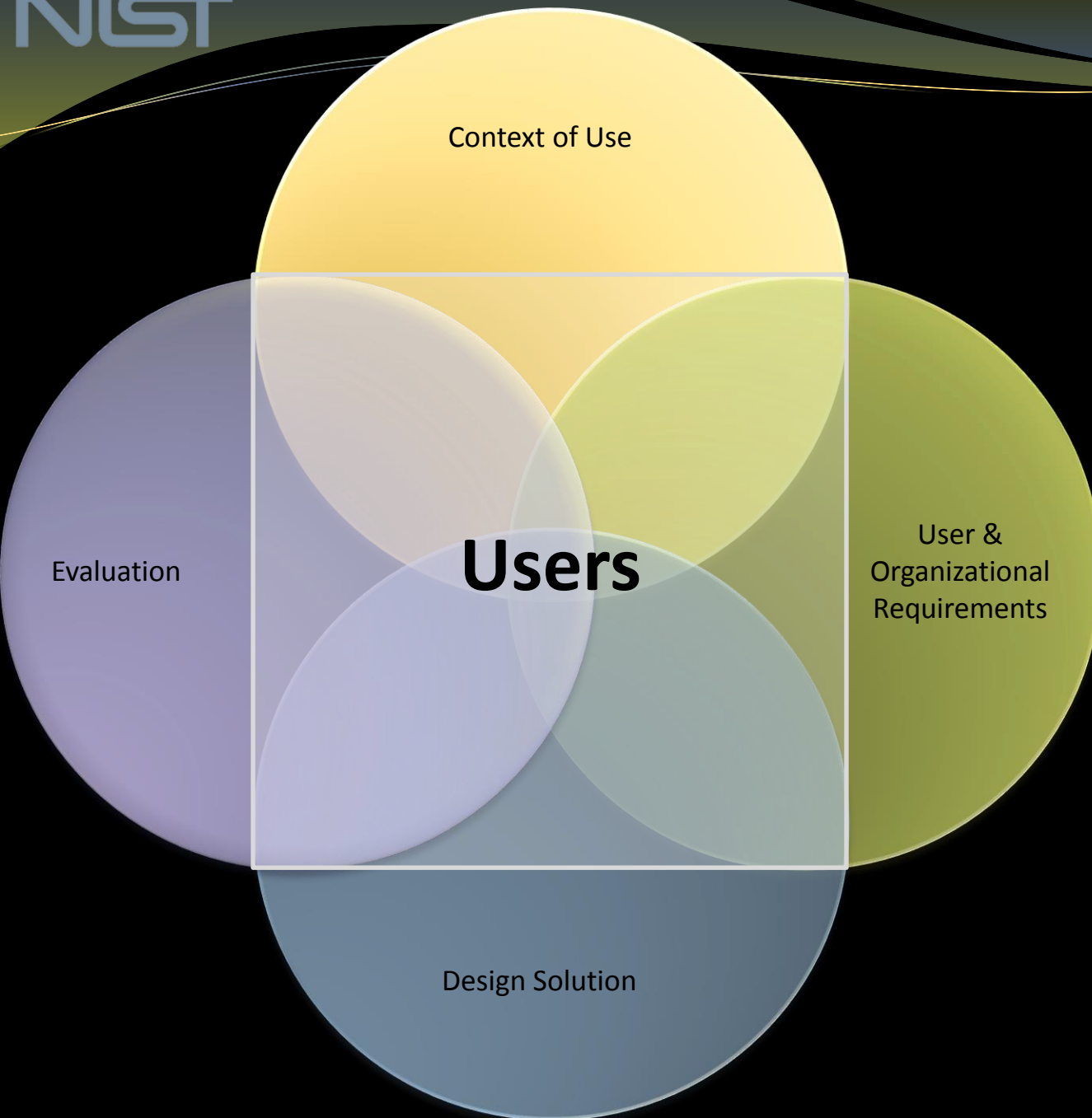
# System Lifecycle

- ISO/IEC 15288 Systems and software engineering – System life cycle process



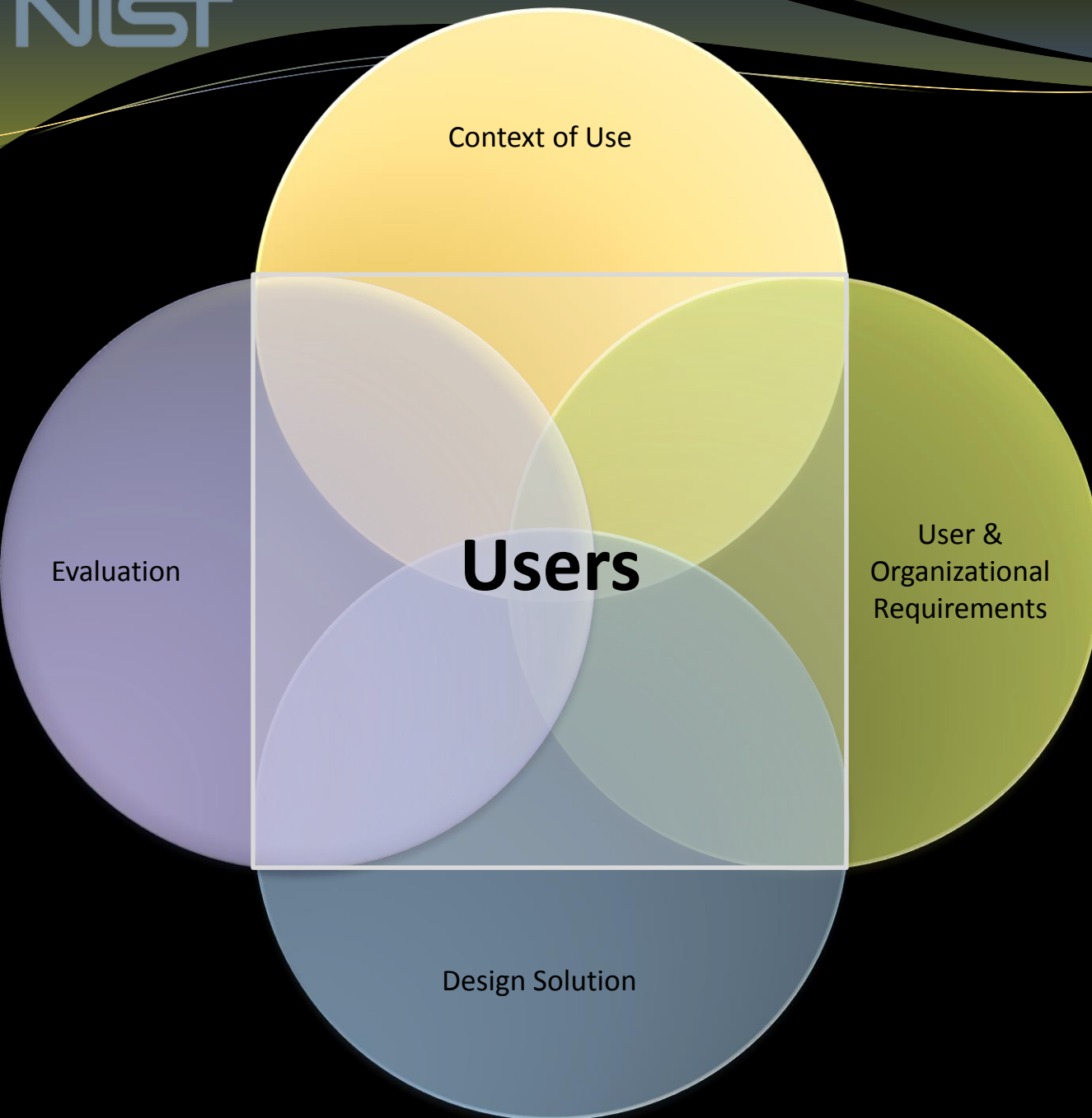
# CIF Standards

- ISO/IEC 25063 Context of Use Description
- ISO/IEC 25064 User Needs Report
- 25065 User Requirements Specification
- User Interaction Specification
- User Interface Specification
- 25066 Evaluation Report
- Field Data Report
- ISO/IEC 25062 (summative test report)



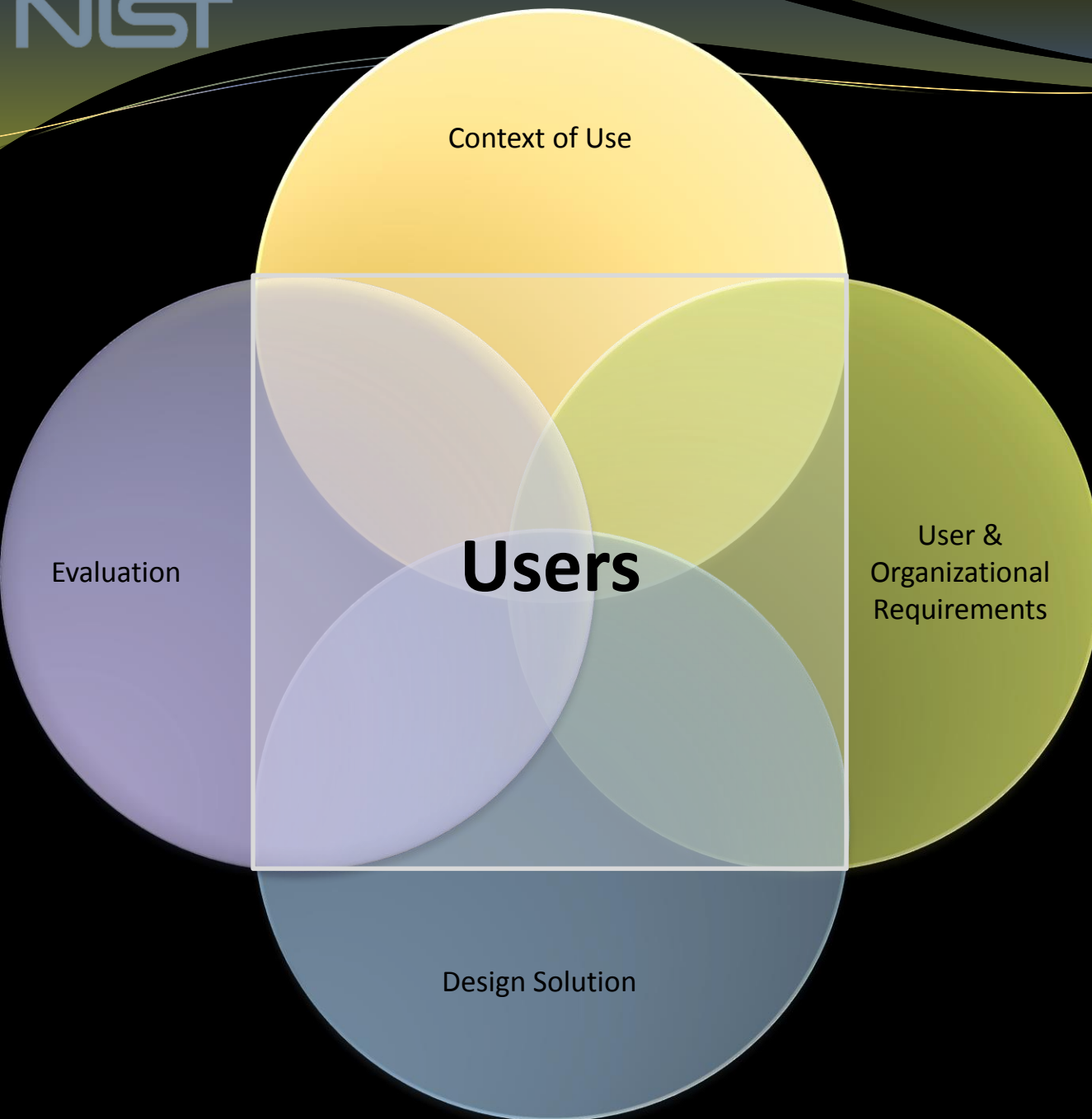
- 25063 Context of Use Description
  - System Goals
  - Stakeholders
  - Users characteristics
  - Tasks
  - Environments



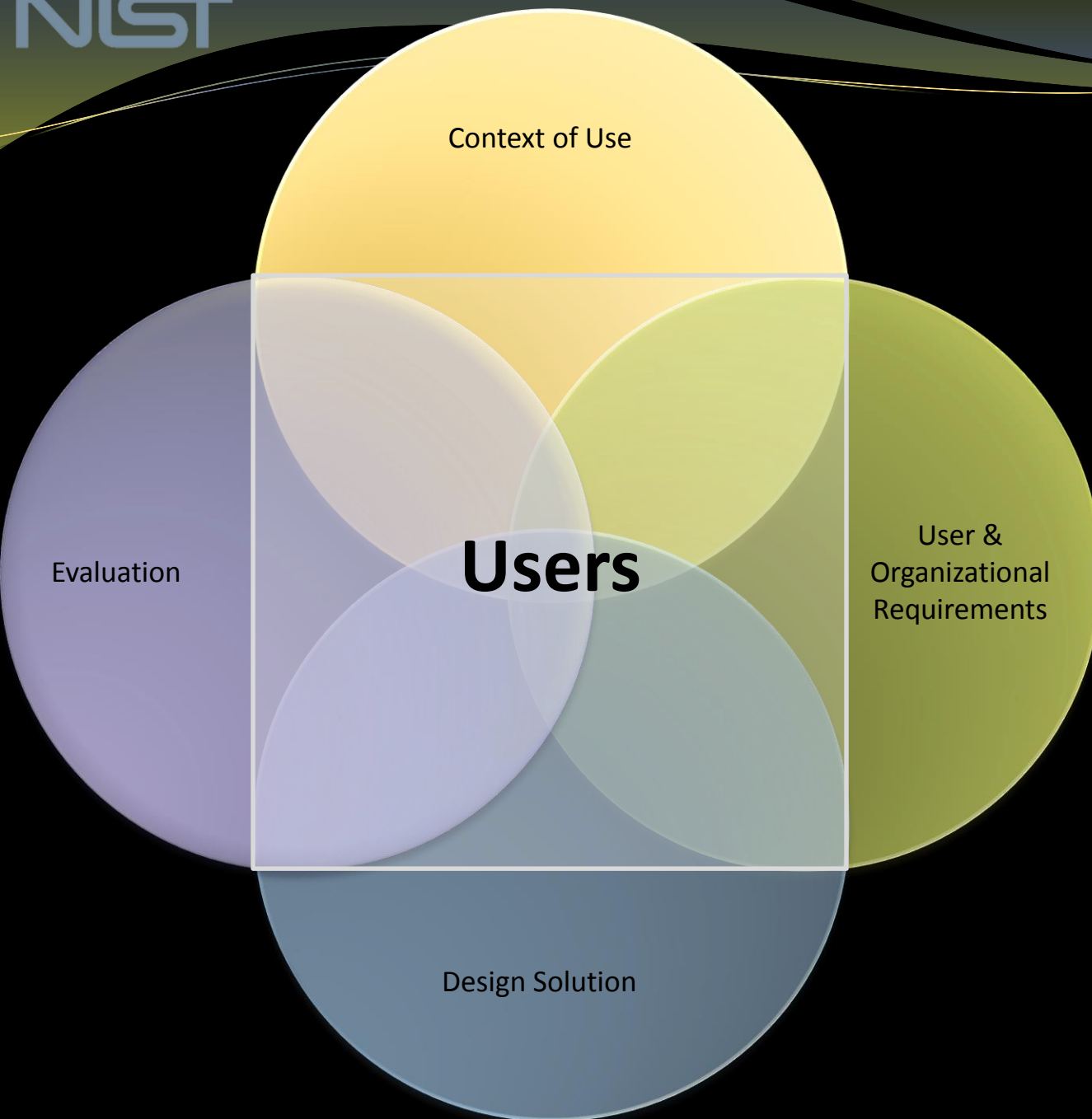


- 25064 User Needs Report

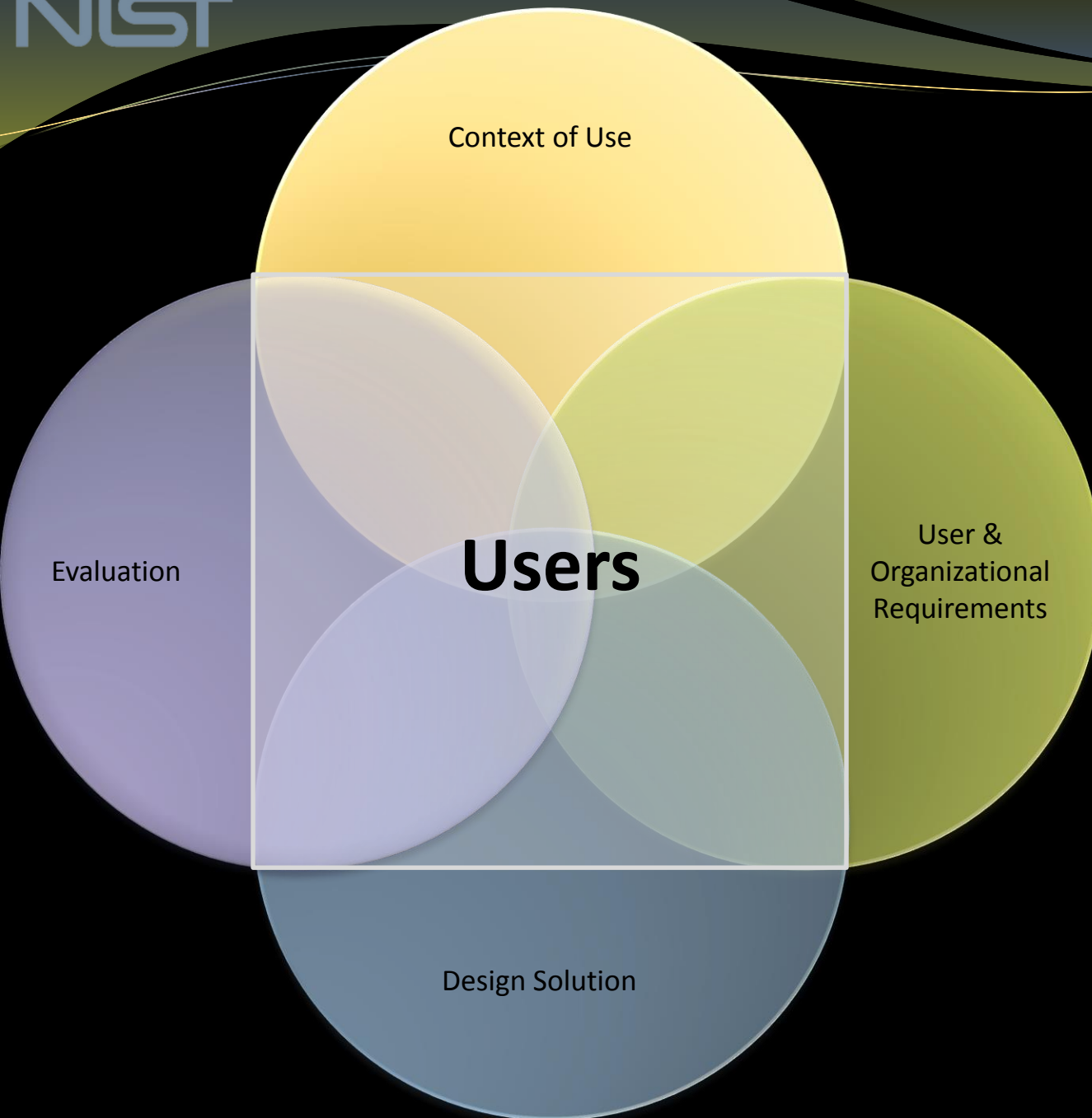
- Identified
- Stated
- Derived
- Implied



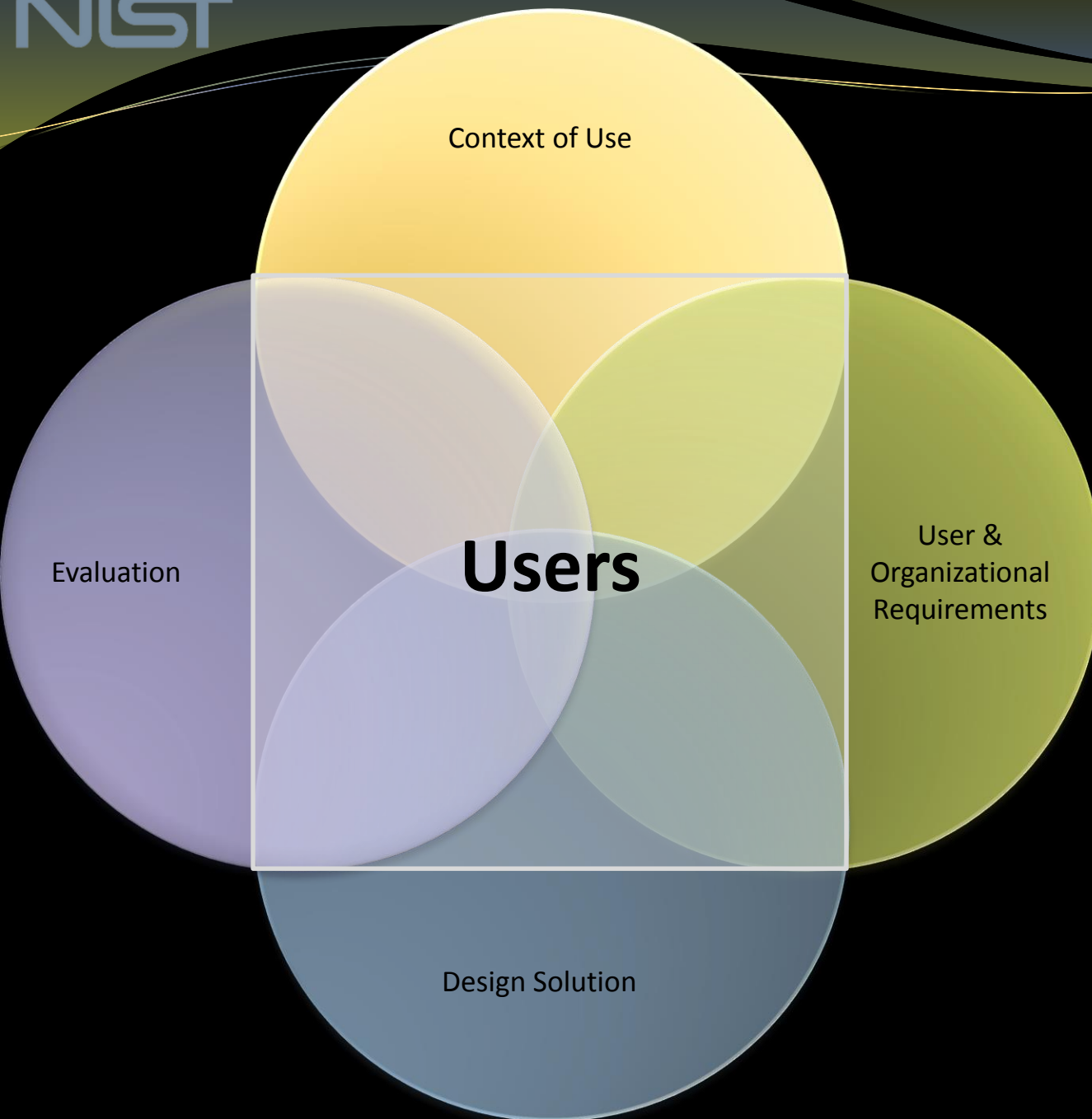
- 25065 User Requirements Specification
  - Context of Use
  - User Needs
  - Relevant UI knowledge, standards, & guidelines
  - Effectiveness, efficiency, satisfaction criteria
  - Organizational



- User Interaction Specification
  - Workflow
  - Subtasks
  - Dialogue Model
  - Task specific usability objectives
  - Information architecture

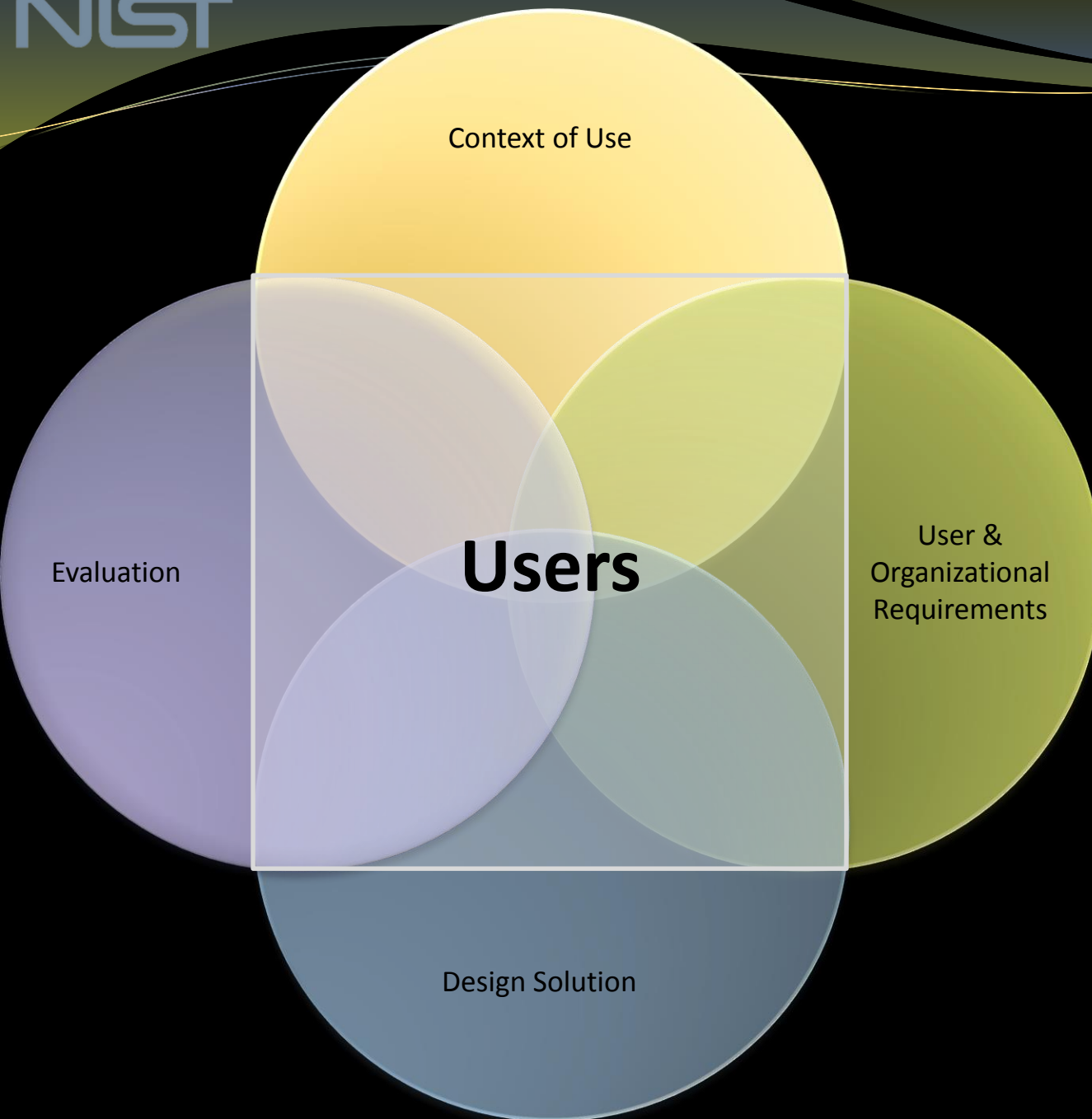


- User Interface Specification
  - Task & system objects
  - User Interface elements
  - Views
  - Properties, behaviors, & relationships
  - Dialogue techniques

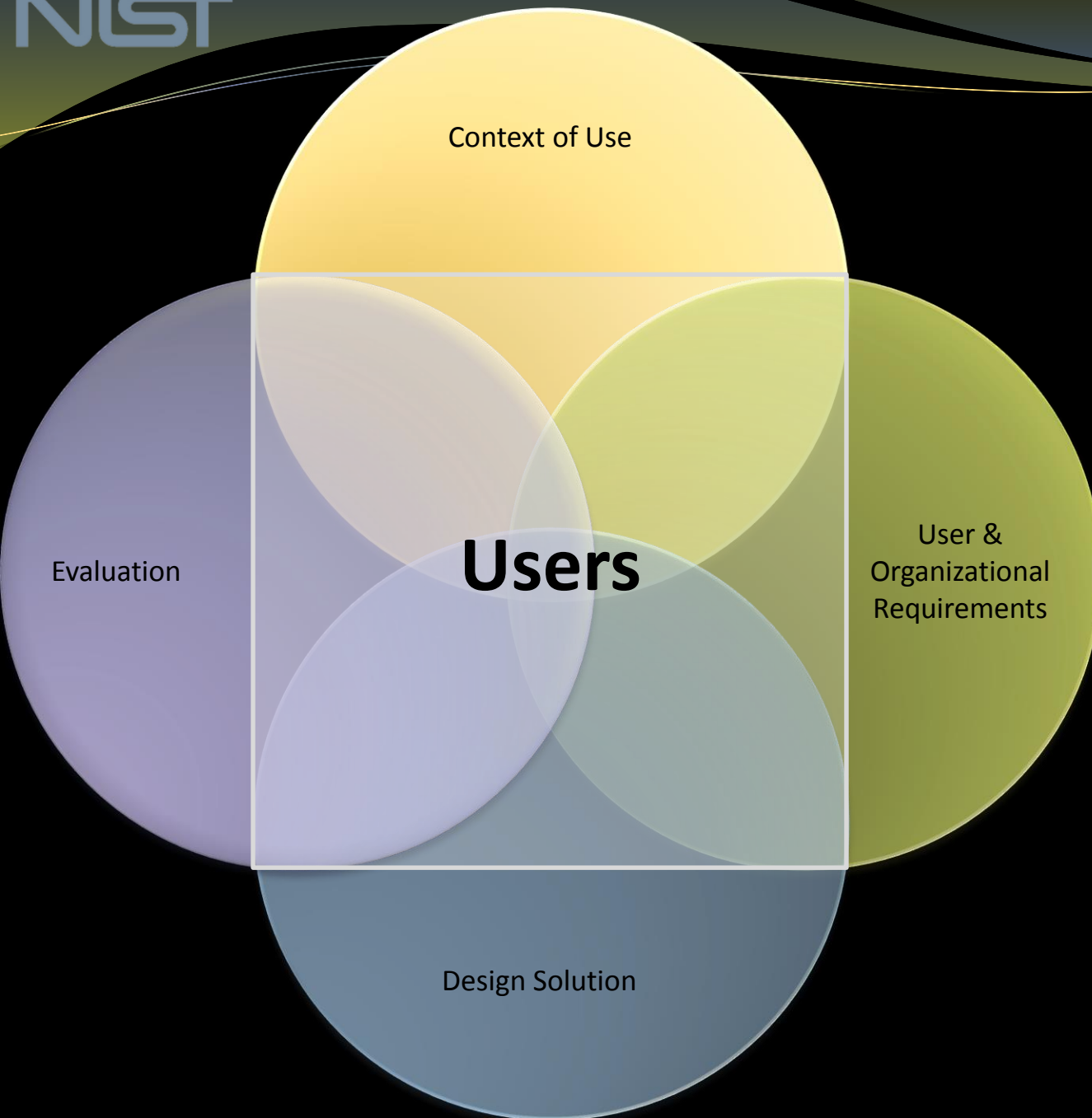


- Evaluation Report

- Usability problems
- Recommendations
- Conformity with user requirements

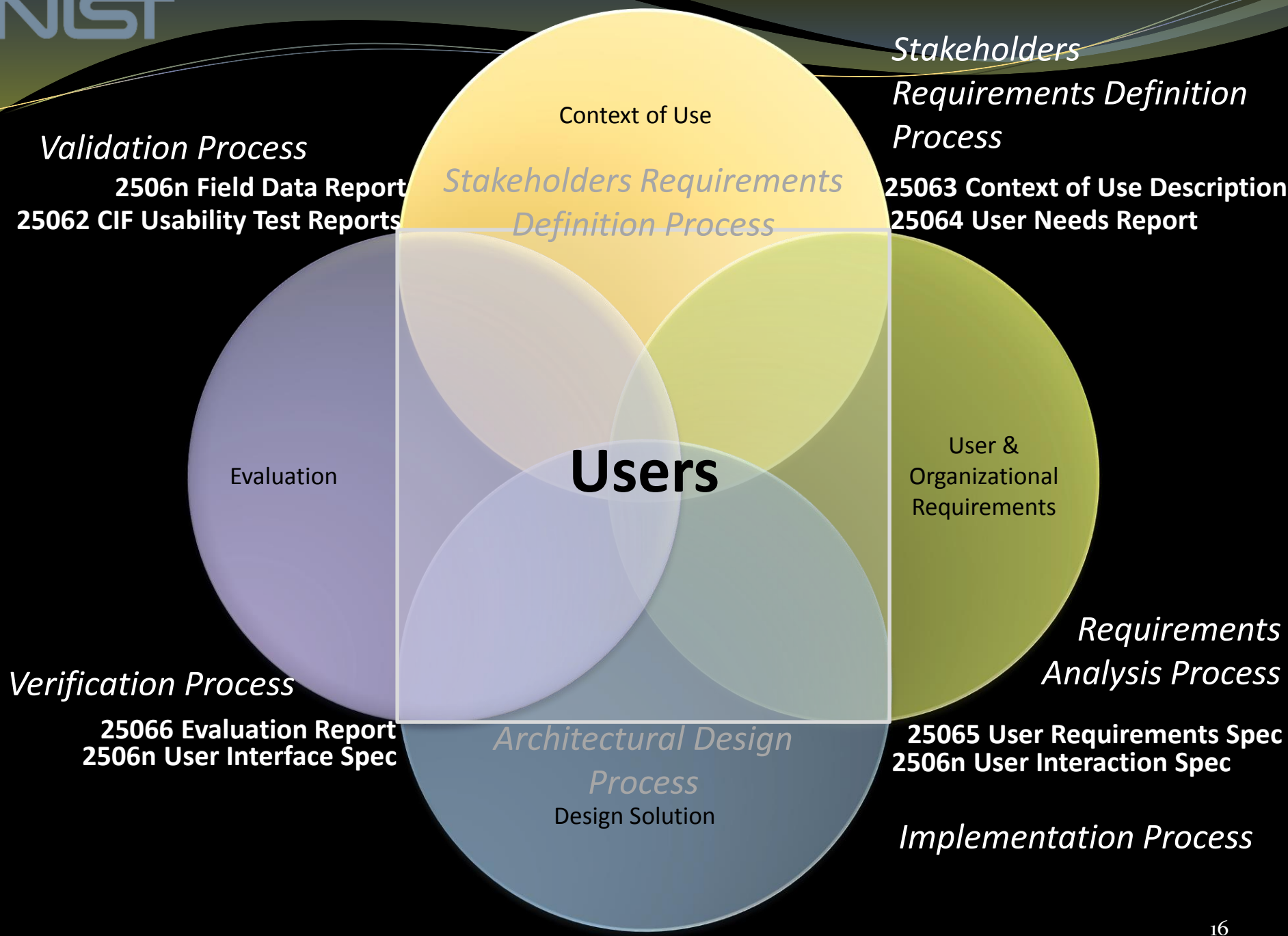


- ISO/IEC 25062
  - Formal summative evaluation
  - Baseline
  - Comparison among products



- Field data report
  - Actual usage
  - Emergent user requirements

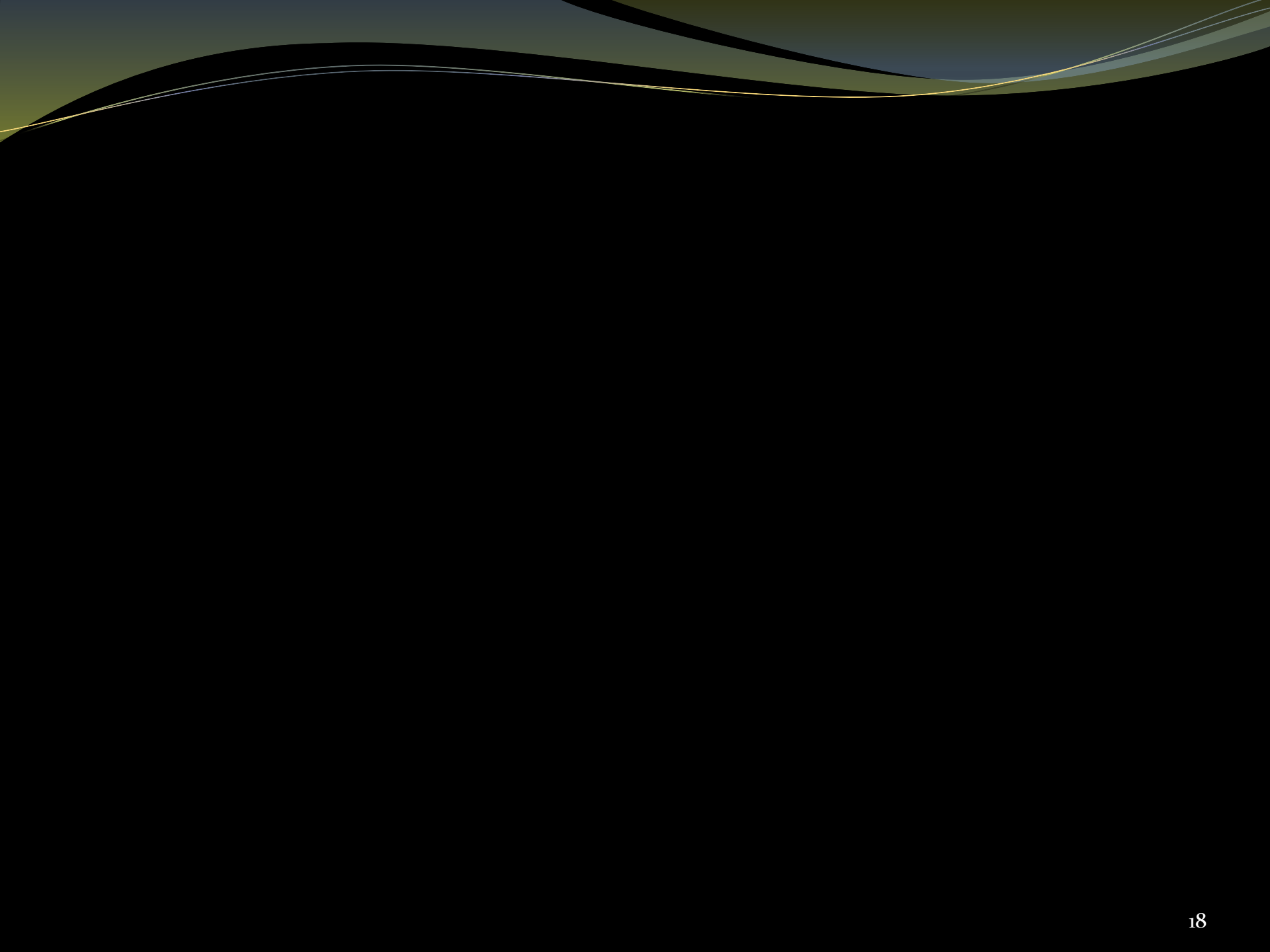


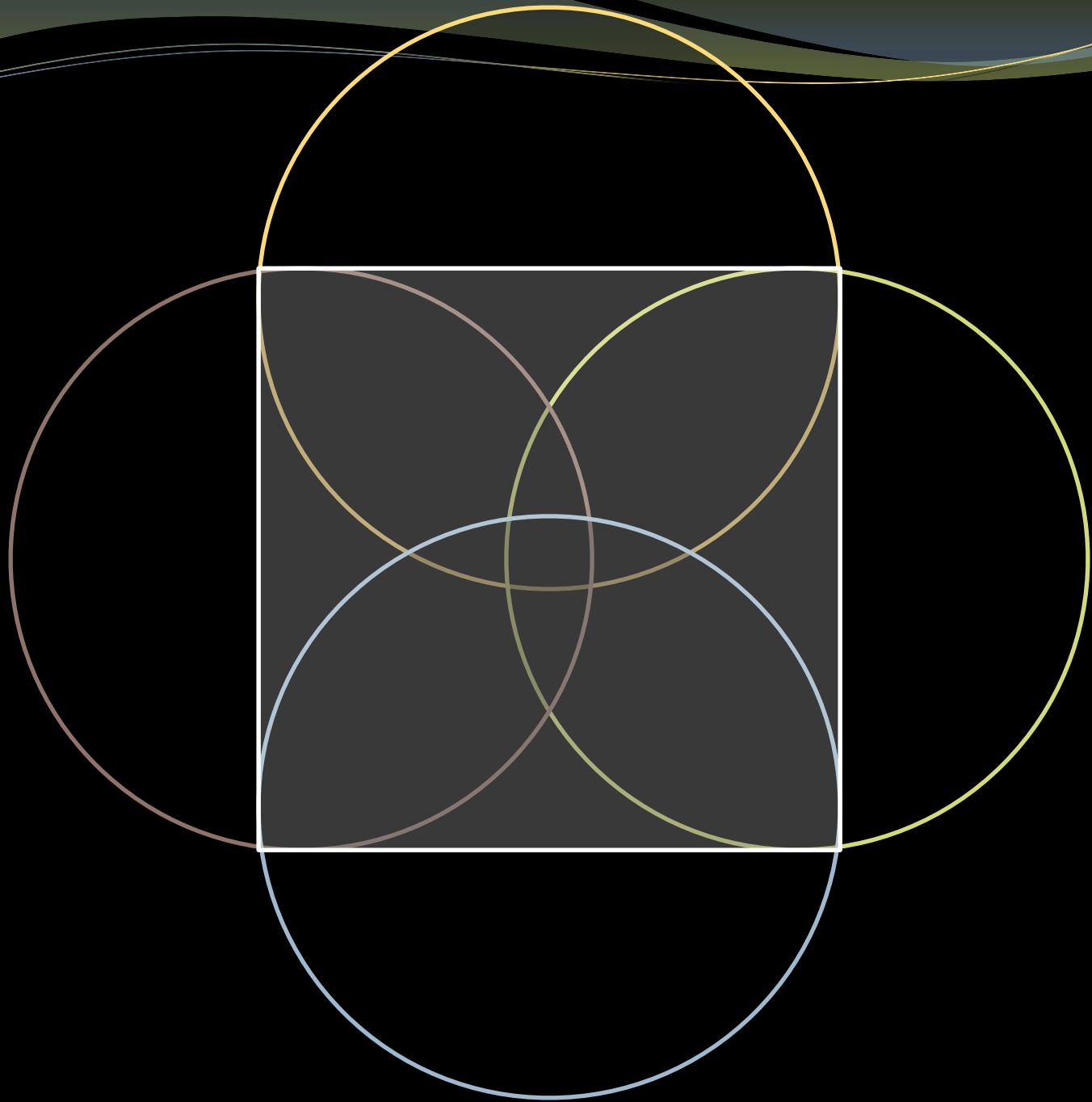


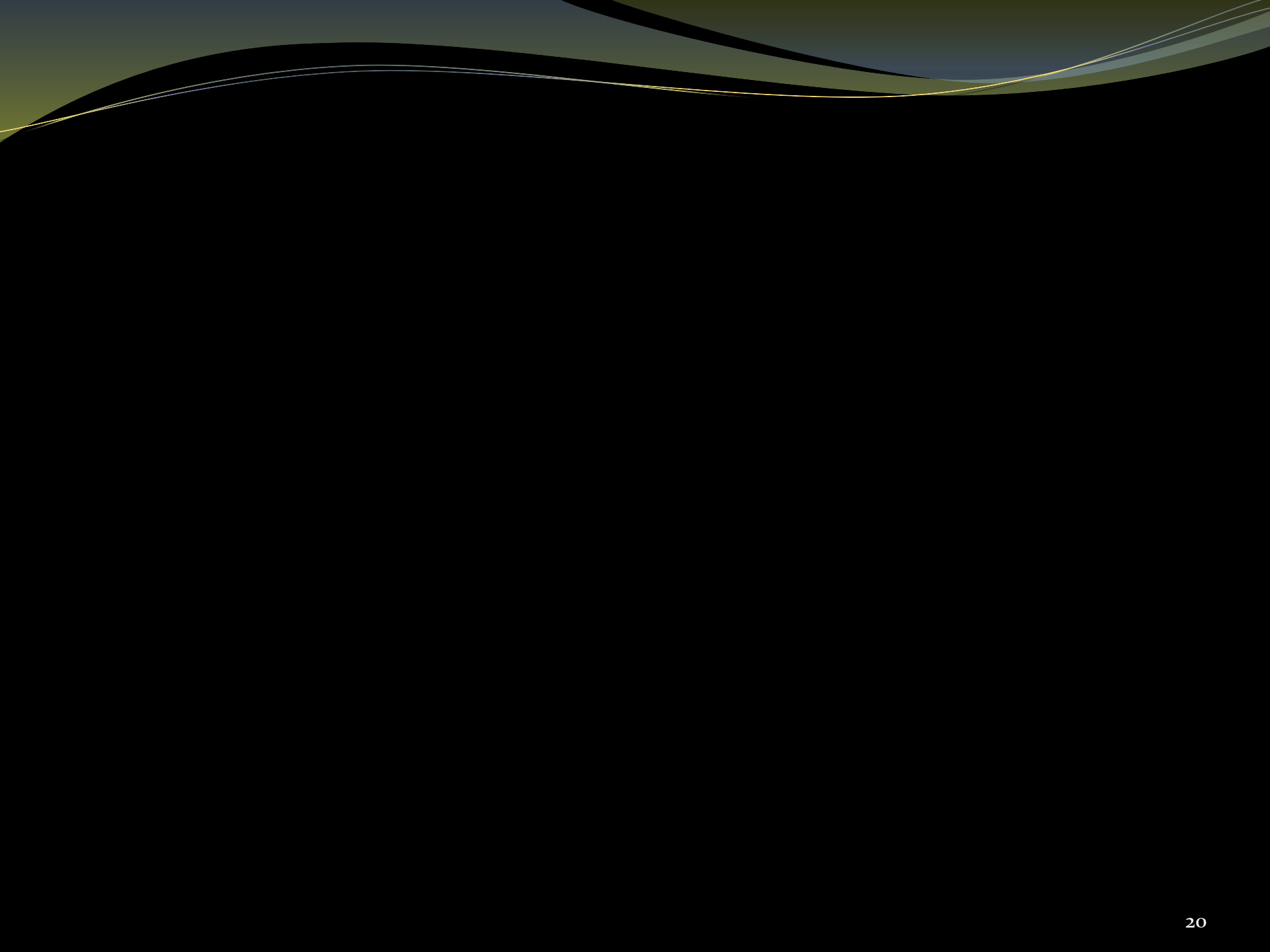


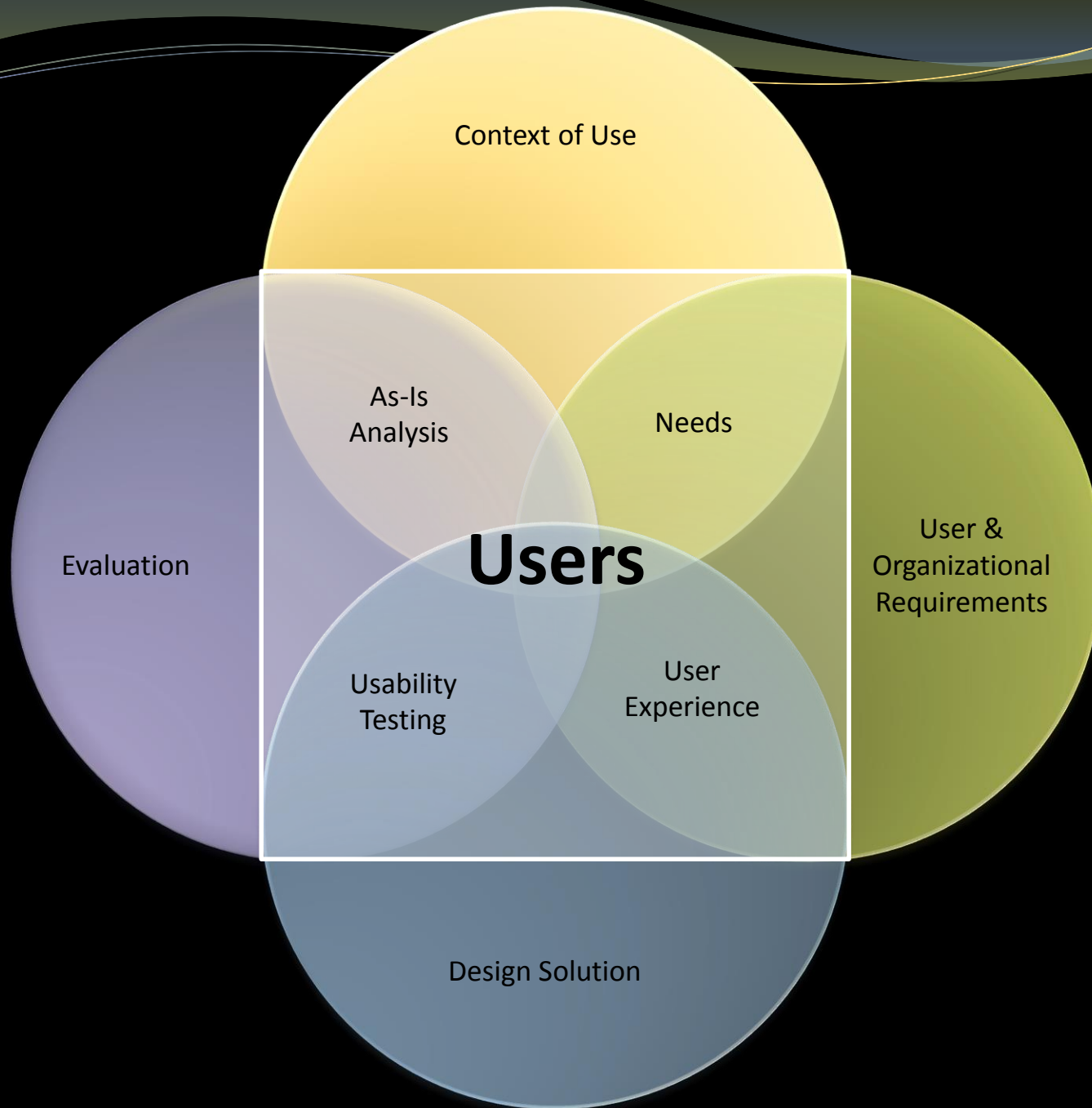
# Thank you

- Questions
- [brian.stanton@nist.gov](mailto:brian.stanton@nist.gov)
- [www.iso.org](http://www.iso.org)









Context of Use

As-Is  
Analysis

Needs

Evaluation

**Users**

User &  
Organizational  
Requirements

Usability  
Testing

User  
Experience

Design Solution