PHASE 2
FRAMEWORK

RESEARCH IT SUPPORT NEEDS
MOVING FROM NEEDS ASSESSMENT TO DEVELOPING SOLUTIONS THROUGH WORKING GROUPS

JANUARY 2023
(MEMBERSHIP UPDATED MARCH 23)
THREE PHASE PROCESS, WITH FEEDBACK LOOPS

**Phase 1**
Assess Needs Duke-wide
Faculty Driven
February - October

**Phase 2**
Propose Solutions
Service Partner Driven
November - April

**Phase 3**
Determine Structures
Institutionally Determined
(est.) May - July

We are here
PHASE 2: WORKING GROUPS (WGs) TO PROPOSE SOLUTIONS

December
- Identify sponsors (VPs, Academic Leaders), develop WG charges
  - WG timeline: concentrated but bounded (~3-month) commitment
  - WG charges: address recommendation(s) and estimate complexity + cost

January
- Launch 6 WGs, comprising project leads, members and faculty
  - Project leads span OIT, ORI, and DUL; members span those groups and other service provider units; faculty drawn primarily from Phase 1 participants and ITAC

February-mid-April
- WGs develop proposals over focused 10-week schedule
  - Project leads meet weekly and full project team meets bi-weekly
  - Faculty check-in wks 5 & 9; Sponsor prelim. readout wk 6 or 7, final update wk 10

mid-April-May
- Proposal submission and vetting with Phase1 faculty & other bodies
  - Proposals for strategic advances (Findings A-C) should be implementable in ≤1-2 years; for service enhancements (Findings D-F) implementable in ≤6-12 months
Each Work Group (WG) has varied membership and roles, and a focused but bounded commitment

**Sponsors:** Administrative & Academic leaders who convene teams, monitor progress, ensure proposed solutions are responsive to the need, then advocate for the proposals

**Team Leads (Co-chairs):** Senior administrative personnel (sometimes including faculty) who lead & oversee the WG effort and take responsibility for the WG achieving its deliverables

**Members:** Other administrative personnel who provide staff support to the process

**Faculty Champions:** Designated in italics, they provide feedback loop so emerging solutions address the expressed needs; one or more from Phase 1 and one or more from ITAC

**Staff Facilitators, Consulting Experts, Faculty Consultees:** Resources to the team, called upon by Team Leads, as needed throughout the process to share their perspective / expertise

**Week 1: Kickoff – All + Sponsors**
**Week 2: Team leads**
**Week 3: Team leads, members**

**Week 4: Team leads**
**Week 5: Team leads, members, & faculty champions**
**Week 6: Team leads**

**Week 7: Team leads, members**
**Week 8: Team leads**
**Week 9: Team leads, members & faculty champions**
**Week 10: All + sponsors**
SUMMARY FINDINGS AND RECOMMENDATIONS
(FINAL REPORT NOW AVAILABLE AT: https://duke.is/72sjn)

**People: Expand and Improve (IT) Support**

A. Duke lacks sufficient personnel to support domain specific research

1. Build and support new teams of domain-specific technical personnel
2. Develop & catalog training resources as an ongoing education program

**Process: Reduce Structural (IT) Barriers**

B. Separate research infrastructures hinder research and collaboration

3. Objectively assess costs/benefits of dual and decentralized research IT infrastructures, which confuse and frustrate faculty

C. Current security / compliance approaches seem “one size fits all”

4. Evaluate current policy, security and compliance IT-related requirements and processes toward a holistic risk-based institutional approach

**Technology: Enhance and Simplify IT Offerings**

D. OIT Services are valuable but not as expansive as faculty require

5. Evaluate approaches to extend OIT’s computational services (HPC, GPU)
6. With faculty input, tune services to better support faculty need (data, ML)

E. Plethora technical solutions and use constraints create confusion

7. Clarify / simplify technical solutions for particular research uses, stressing common services available to both campus and SoM (both cloud & local)

**Technology: Enhance and Simplify IT Offerings**

F. Current storage services don’t span research lifecycle or university

8. Implement long term storage options spanning campus and SoM
9. Automate data migration over lifecycle
10. License datasets as we do software
FINDINGS AND RECOMMENDATIONS ARE INTERDEPENDENT

- **Process**: Reduce Structural (IT) Barriers

  - **People**: Expand and Improve (IT) Support
    - A. Duke lacks sufficient personnel to support domain specific research
  
  - **Technology**: Enhance and Simplify IT Offerings
    - B. Separate research infrastructures hinder research and collaboration
    - C. Current security / compliance approaches seem “one size fits all”
    - D. OIT Services are valuable but not as expansive as faculty require
    - E. Plethora technical solutions and use constraints create confusion
    - F. Current storage services don’t span research lifecycle or university
A. Duke lacks sufficient personnel to support domain specific research

Deliverables: 1) Viewing resources from existing support functions as raw materials, propose 2 or more options for Duke-wide approaches that deliver domain-specific technical personnel (via direct, distributed or virtual teams). 2) Catalog training resources as underpinnings for an ongoing research education program (for faculty, grad students, undergrads). 3) Identify pilot and expansion targets and estimate cost and opportunities (e.g., grants for grad students) to scale broadly in production.
PARTNERS WILL HELP PROGRESS FINDINGS TO PROPOSALS

Process: Reduce Structural (IT) Barriers

B. Separate research infrastructures hinder research and collaboration

Sponsors
- Jenny Lodge
- Tracy Futhey
- Joe Salem
- Mary Klotman
- Gary Bennett
- Jeff Ferranti

Leads
- Geeta Swamy (ORI)
- Tim McGeary (DUL)
- John Board (Pratt, OIT)
- Ed Gomes (Trinity)
- Dave MacAlpine (SoM)

Members, Fac. Champions
- Megan von Isenburg (SoM)
- Katie Kilroy (OIT)
- Randy Arvay (DHTS)
- Amy Herring (Trinity)
- Charles Gersbach (Pratt)

Deliverables: 1) Develop charge for external review committee to assess Duke’s dual and decentralized research infrastructures and make recommendations. 2) Propose review committee members (target universities w/ tightly coupled AMCs), collect background materials, and identify Duke stakeholders to participate. 3) Facilitate and support external review team visit. 4) Translate external review team findings and recommendations into one or more Duke implementation proposals.
Deliverables: 1) Catalog current policy, security and compliance requirements / processes that lack discernable, risk-based approaches. 2) Propose adaptations that balance compliance / regulatory requirements against researcher needs. 3) Identify adjustments to research-related governance bodies to better incorporate representative feedback across the diversity of Duke’s research enterprise and work towards increased transparency.
Deliverables, focusing on OIT-specific services: 1) Recommend one or more standing faculty-led structures to guide OIT’s research evolution, in conjunction with ITAC. 2) Propose changes to OIT’s research-services portfolio, initially via ITAC and in the future through the faculty structure, as accomplishable within OIT’s existing resource base. 3) Identify and propose other services (e.g., course-oriented or domain-specific DCC resources) and estimate cost models.

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<tr>
<td>OIT Services</td>
<td>Jenny Lodge, Tracy Futhey, Jerry Lynch</td>
<td>Charley Kneifel (OIT), Terri West (DHTS), Rebecca Brouwer (ORI), Jim Daigle (Pratt)</td>
<td>Ed Gomes (Trinity), John Robinson (OIT), Katie Kilroy (OIT), Henry Pfister (Pratt), Colin Rundel (Trinity)</td>
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**Technology: Enhance and Simplify IT Offerings**

**Sponsors**
- Jenny Lodge
- Tracy Futhey
- Jerry Lynch

**Leads**
- Charley Kneifel (OIT)
- Terri West (DHTS)
- Rebecca Brouwer (ORI)
- Jim Daigle (Pratt)

**Members, Fac. Champions**
- Ed Gomes (Trinity)
- John Robinson (OIT)
- Katie Kilroy (OIT)
- Henry Pfister (Pratt)
- Colin Rundel (Trinity)

**Faculty Consultees:**
- Don Taylor
- Edward Triplett
- Eric Perakslis

**Staff Facilitators:**
- Gary Hoke
- Logan Roger (finance reps, as needed)
E. Plethora technical solutions and use constraints create confusion

Deliverables, across Duke providers: 1) Catalog compute, storage & related research technical services for faculty and students (on-prem + cloud-based). 2) Propose consolidation of research-service offerings where practical and if the resulting simplification improves the researcher experience or reduces cost w/o degrading service. 3) Recommend improvements to the communication of service offerings that better convey the options matching a research need.
Deliverables: 1) Evaluate and propose long-term storage options and funding models, extensible Duke-wide. 2) Identify opportunities to automate movement of data across solutions over the research lifecycle, leveraging grants as practical. 3) Adapt offerings to ensure their viability across domains (differing storage needs) at Duke. 4) Evaluate and propose data resource services (licensing, staffing sharing) to meet needs expressed in Phase 1.

F. Current storage services don’t span research lifecycle or university

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Consulting experts: Carlton Brown, Lisa Cameron
Staff Facilitators: Logan Roger, Tim McGeary, Terri West