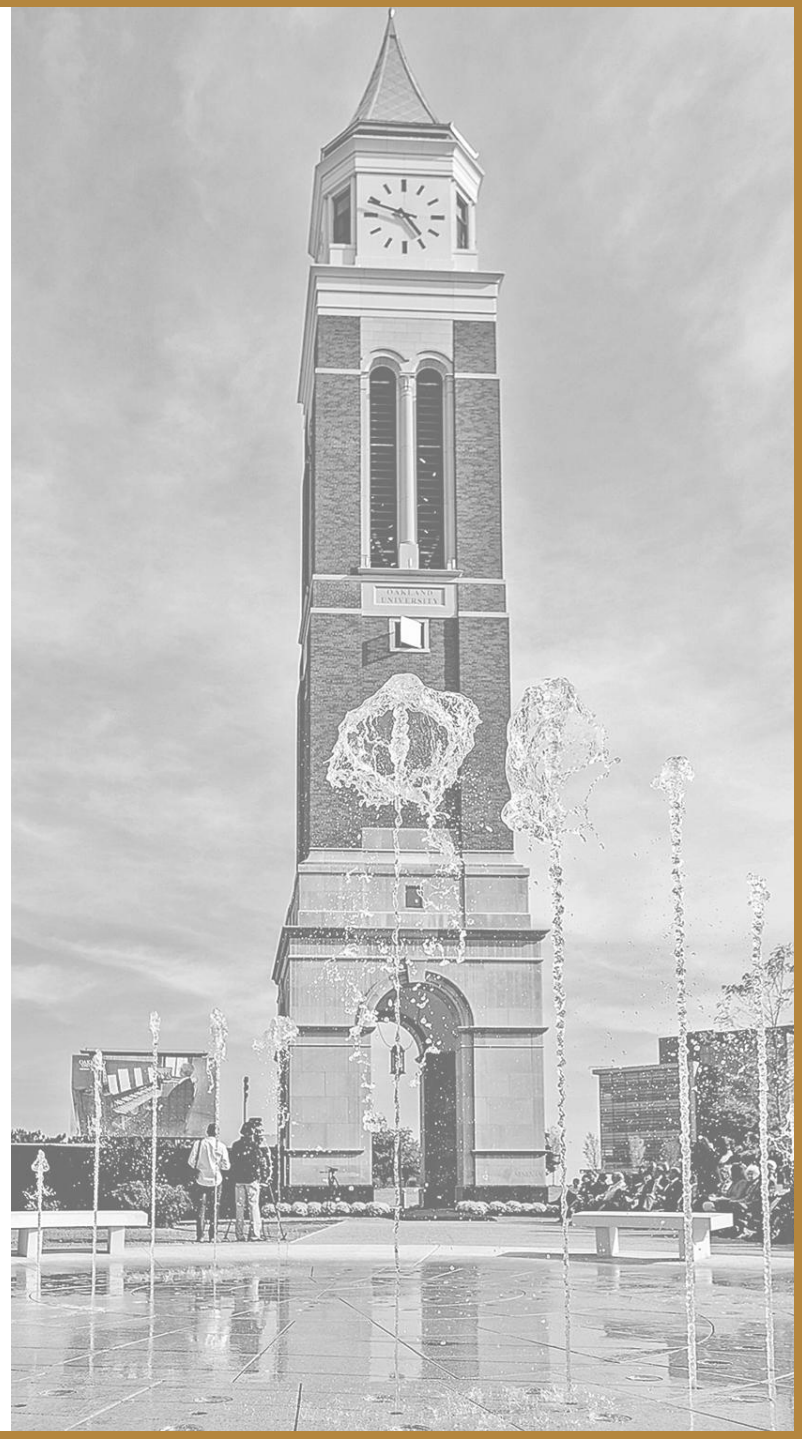
Understanding the Proposed University Data Center

March, 2026



OAKLAND UNIVERSITY

Data Centers Overview

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What is a Data Center?

- A facility that houses the computing infrastructure needed to store, process, and deliver data
- Provides the backbone for applications, cloud services, AI research and digital communication
- **Every business, educational institution, and every digital device (cell phone, car, refrigerator, etc.) utilizes a data center to run its operations.**

Data Center Components

Data Centers are made up of six main components which will be detailed in the following slides.

1. Servers
2. Storage
3. Network Infrastructure
4. Cooling Systems
5. Power Systems
6. Physical Security

What are the Different Types of Data Centers?

Edge Data Centers

- Small, in close proximity to the people and devices they serve.
- Reduces delays by processing data near its source rather than at a distant central facility.
- Often deployed in micro or modular formats.
- Examples: autonomous vehicles, robotics, etc.

Enterprise Data Centers

- Small to medium sized.
- Owned and operated by a single organization for its own exclusive use.
- Located on-site or at a dedicated off-site facility.
- Examples: OU’s data center and MATILDA.

Colocation Data Centers

- Small to large sized.
- A shared facility where one or more businesses rent space, power and cooling.
- A cost-effective alternative to building separate facilities.
- Examples: businesses that need data infrastructure without building their own.

Hyperscale Data Centers

- Massive facilities spanning over 1,000,000 square feet owned by large technology companies.
- Powers global cloud, AI and big data via thousands of servers.
- Examples: Amazon, Google Microsoft, Meta

Comparison

- The proposed OU Data Center is a university data center shared with academic and select industry partners.
- Supports teaching, research, and student opportunities, while building industry partnerships.
- Significantly smaller than the hyperscale data centers in the news.

- **OU’s data center will be about the same size as North Foundation Hall**
- **Hyperscalers are about the same size as SIX Oakland Centers**

Why Universities Need Data Centers

- Core digital communication (email, file sharing, virtual desktops)
- Online classes and learning platforms
- Campus enterprise systems (HR, Finance, Enrollment)
- Research computing and artificial intelligence
- Secure academic and data protection
- Cloud and digital storage
- Global connectivity

Data centers are essential infrastructure that power student learning, data security and the university’s long-term strength and competitiveness

Existing Campus Data Centers

- OU’s primary data center is housed in Dodge Hall. There is a secondary data center located in North Foundation Hall where the MATILDA high power computing system resides.
    - OU’s current data centers are older, not state-of-the-art
    - MATILDA is nearing end of its operational life, needs to be replaced
    - There is increasing need for high-power computing for campus
    - Extremely energy **in-efficient** in these locations
- Relocating OU’s current data centers and MATILDA will open up space for academic/research labs and other uses.

New Data Center Potential Benefits

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Expanded Capacity

- Expansion of computing capacities to address needs in:
  - Teaching
  - Research
  - Artificial Intelligence
  - Digital Services
- These needs cross the College, schools, departments and divisions of the university.

AI Research Opportunities

- This project will support OU’s Pathway to R1
- Faculty driven research spans biological sciences, computer science, industrial and systems engineering, population health, statistics and more.
- There is an opportunity to build and fund a new AI Institute and expand high-performance computing capacity, creating MATILDA 2.0

Expand Lab Space

- By moving OU’s current data center out of Dodge Hall, space will become available for academic laboratories and research space as part of the Dodge Hall renovation.
- Additional space in North Foundation Hall would also be available for other uses.

Student Opportunities

- Students will gain access to academic programs and research utilizing state of the art, high-performance computing tools.
- Learning opportunities utilizing artificial intelligence will be expanded.
- Hands-on learning in data center operations as well as
- Internships and jobs with affiliated industry partners.

Industry Partnerships

- Industry partners will be contractually affiliated with the university, participating in student internships, research projects, technology transfer, etc.
- The project will attract technology and research partners to campus, strengthening OU’s industry connections.

Environmental Considerations

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Initial Sustainability Commitments

- No reductions in green space.
- Power to come from excess capacity at an existing substation on campus, not from the grid.
- Cooling methods and heat recapture to meet green design standards and align with OU’s decarbonization plan.
- Sound mitigation best practices.
- **Sustainability will be incorporated into the design phase of the project.**

How the Data Center Can Support Sustainability

- Expanded cloud and remote-access capabilities reduces the need for physical commuting, directly lowering scope 3 emissions.
- Data center power usage can be offset by users utilizing online and cloud services, reducing onsite power usage.
- Centralizing compute power directly reduces OU's aggregate carbon footprint by eliminating inefficient "closet servers" across campus.
- Faculty research in many fields, **including research in sustainability**, will be aided by greater computing power and AI.

Data Center Project Phasing

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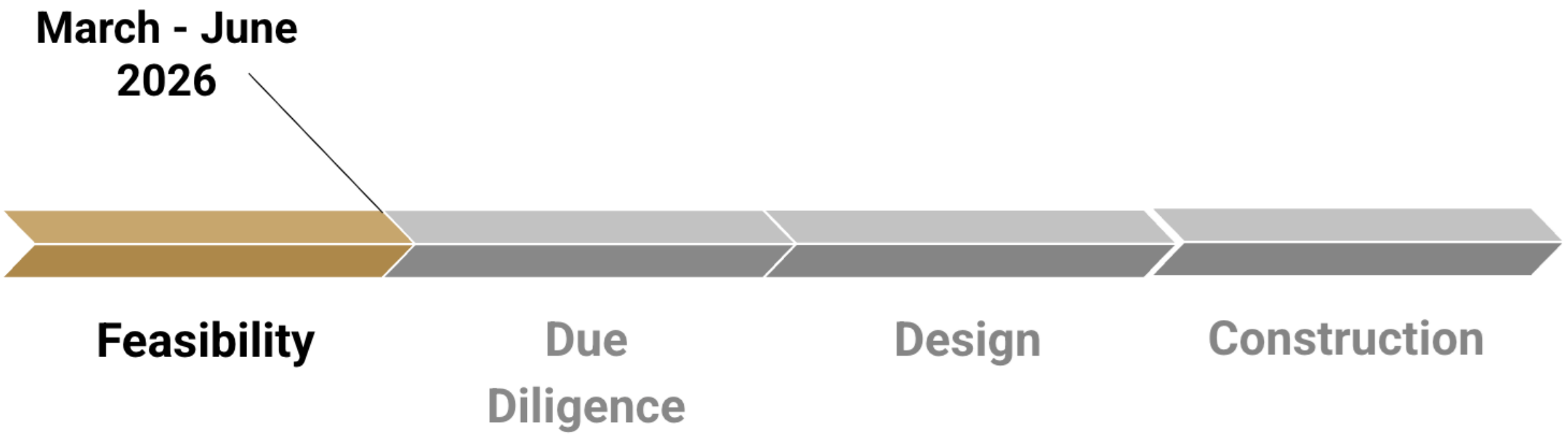
Project Phasing Diagram



Feasibility Phase: Is This Even Possible?

- Timeline: March 2026 through early June 2026
- Entails:
  - Confirming power and fiber optic connectivity; financial viability
  - Quantifying computing needs for academic and research purposes with faculty from across the university
  - Identifying industry partners for research and student internships
  - Engaging with campus stakeholders via shared governance committees, town hall and survey for ideas and input.

Note: data center design, construction and specific systems will be determined in subsequent phases, i.e. design phase

Due Diligence Phase: Should We Do This?

- Pending feasibility and Board approval to move forward
- Entails:
  - A deep-dive assessment entailing evaluation of site conditions and environmental impact studies

Design Phase

- Detailed programming and design phase entails:
  - Building layout, building and site design, technical systems, means and methods of construction and overall plan
  - Preparation of construction documents and specifications

Construction Phase

- Construction of the Data Center occurs during this phase
- Timeline: estimated to take 12-18 months following completion of the design phase

Campus Engagement - Shared Governance Committees

- Senate Steering Committee
- Senate
- SBRC
- SPRC
- CDEC
- OU Student Congress
- President’s Cabinet

Campus Engagement - Additional Avenues

- March Town Hall
- Campus Survey
- Updates to OU Post and WXOU
- Data Center website updates
- Program assessment meetings with colleges, schools, academic committees and UTS

Q&A *Section*