Statement of Direction
2018

Northwestern | INFORMATION TECHNOLOGY

Northwestern University Information Technology
Statement of Direction

Executive Summary

Built upon a culture of collaboration and service excellence, Northwestern Information Technology (IT) delivers quality and sustainable technology services in support of the University's ambitious mission and strategic priorities. Together, we will deliver on Northwestern's commitment to:

- Enhance the University's intellectual eminence and impact
- Continue to build research eminence
- Support the student experience
- Enhance global academic reputation and presence
- Strengthen the enabling support for our ambitions

This Statement of Direction is developed with a specific context and a number of critical factors in mind, including:

- **Drivers of change**—The world of technology advances rapidly, and we must remain ever mindful of these drivers and be agile in our approach to developing technology adoption plans.
- **Financial realities**—As the University continues to rebalance its financial operations, Northwestern IT must achieve its goals within a new environment.
- **Alignment, execution, and engaged governance**—We will embrace and drive a more integrated approach to planning and delivering services for Northwestern.

We will assess progress on an annual basis. Success hinges on the ability to positively impact our partners and provide support for Northwestern's commitment to excellent teaching, innovative research, and the personal and intellectual growth of students. We will deliver on these objectives by addressing seven key priorities:

- Enrich the learning and teaching environment
- Help our digital research community succeed in an environment of broadening computational landscape
- Improve the faculty experience
- Improve the student experience
- Enable administrative services to effectively and efficiently support our constituents
- Deliver reliable infrastructure services as we move to more agile solutions
- Manage the risks associated with information security

As an organization, we also remain committed to the foundational efforts that have helped drive institutional success in recent years, including fostering a culture of collaboration, cooperation, and service excellence; investing in and preparing the next generation of IT leaders; and developing a comprehensive model for the University's move to the Cloud.

In advancing this plan and our activities, we look forward to continued partnership and success in meeting the community's IT delivery needs in the months and years to come.

Planning Context

Information Technology Drivers of Change

Northwestern IT's work and success are informed and affected by drivers of change in the world around us and within higher education. As in previous years, we consider these drivers to better calibrate our technology adoption plans with best practices in the information technology industry, help understand the IT delivery needs of our campus community, and anticipate the learning and teaching preferences and expectations of incoming students and faculty.

In the world at large, several drivers continue to grow and impact our technology adoption plans:

- Cloud-computing services are now dominant strategies in almost every application area of importance to Northwestern IT. For areas where we are not already providing Cloud-based infrastructure and services, we are developing a Cloud/on-premises strategy for these IT applications and services.

- Data science advances, integrated platforms for analytics, machine learning or artificial intelligence (AI) capabilities, mobile-centric applications, and the Internet-of-Things have all moved from interesting emerging technologies to fundamental resources that we must incorporate into future technology plans to keep Northwestern competitive. To various degrees, these advances will influence the development of our strategies for the digital learning environment, research support efforts, information security profile, student and faculty support, network services, and our business applications.

- The virtualization of data centers has advanced to the degree that orchestration of digital infrastructure services and the agile integration of on-premises infrastructure with a growing suite of Cloud-based services are rapidly becoming the primary work of most information technology planners. Modern information technology teams are now expected to work in a Continuous Integration/Continuous Deployment environment in which build-test-deploy cycles are usually measured in hours and minutes rather than months and days.

- Information security threats continue to grow in complexity and number. Phishing and social engineering attacks are more sophisticated, and software malware hacks remain a danger to our personally identifiable information and the security of the University's research data. Effective monitoring for cyber-attacks requires the deployment of automated warning systems and sophisticated AI-based diagnostics of network activities.

In higher education, unique drivers are calling for our attention:

- The competition among Research Level 1 (R1) university peers for grant funding grows more intense each year. Distinguishing factors in this competition are an institution's capacity for its researchers to work with massive datasets, easily perform computationally based simulations with rapid turnaround, and provision expert IT consulting staff for the support of research projects.

- More students arrive at universities today accustomed to online learning approaches and, as "digital natives," they embrace online life. These students prefer a mix of online tools and face-to-face activities for an optimal learning environment, and they turn to online platforms for many of their communication needs.

- Regulations such as FERPA, HIPAA, and GDPR require increased planning and records stewardship efforts to ensure universities are in compliance.

- Data literacy is now a critical building block for work in almost every academic discipline or professional program of study. Similarly, research and development of learning analytics platforms suggest that instructors—and students—will benefit from evidence-based feedback regarding academic progress.

Northwestern's Financial Environment

The University has a strong financial foundation. At approximately $10 billion, Northwestern's endowment is among the largest in the United States. In addition, the "We Will" campaign surpassed its original $3.75 billion goal—nearly two years ahead of schedule—and the University increased its goal to $5 billion by the end of 2020. Based on this strong financial position, and as one of the leading research and teaching institutions in the world, Northwestern has been aggressively building upon its strengths and ambitiously investing in many strategic areas. For example, the University has:

- Expanded its recruitment of lead faculty, post-docs, and graduate students in strategic areas
- Built state-of-the-art campus facilities for research and instruction and renovated its historical buildings to high standards of improved functionality
- Expanded student aid and deepened its commitments to campus diversity
- Developed additional global programs and established on-the-ground efforts throughout the world
- Made critical investments in its neighbor communities

In parallel, operating expense growth has outpaced operating revenue growth. To rebalance its operating financial condition, the University cut staffing and operating budgets for FY19 across administrative and academic units. Northwestern IT is playing a significant role in these rebalancing efforts.

As a result of rebalancing, Northwestern IT must achieve its goals within a new environment:

- Our support efforts and service levels will be constrained by reduced-budget realities during the 2018–2019 academic year.
- Our capacity to put into place important new strategic capabilities for the University will be slowed.
- Efforts to successfully recruit new IT staff in critical areas will be more challenging, and our ability to retain top performers against outside competition is at risk.
- Northwestern IT staff efforts for the coming fiscal year will inevitably be more focused on maintaining infrastructure services in their current state rather than improving them through transformation and innovation.

The Importance of a Shared Vision, Holistic Planning, and a Strong Execution Plan

We believe it is important to affirm and share our vision and plans for University IT developments, even while acknowledging the existing challenges for campus IT investments during the next 12–18 months. As we prepared our strategic plans in seven specific areas, we cautiously noted the following:

- Information technology's pace of change in the world around us continues to accelerate. The durable life of legacy systems and IT practices shortens, and the value of their continued use is often far below the benefits of the best new Cloud-based services and IT practices.
- The specialized IT staff skills required for bringing the most benefit to the University's research and learning communities are often the same skills aggressively sought by businesses and competing research organizations in an extremely tight IT job marketplace. Many of these specialized staff skills are qualitatively different than the skill sets previously established for legacy systems and practices. We must build new IT staff skills and retain top talent, all while competing with aggressive recruiting attempts from outside the campus.

- Northwestern IT's vision and an accompanying plan are fundamental to the University achieving many of its goals and far-reaching aspirations. We will advance the strategic plans of the University while assisting with operating budget rebalancing and the streamlining of work teams.

- We will embrace a more holistic approach to planning and delivering services for Northwestern. This approach will feature more comprehensive planning efforts within our governance communities. This work requires even closer cooperation and alignment between Northwestern IT and our partners in the schools, centers, and administrative units. For example, it is no longer in the University's best interests to support differentiated solutions to common business needs. Moving forward, the technologies and services we adopt should, where appropriate, be scaled across the user communities.

Seven Key Priorities for Northwestern Information Technology

Northwestern IT's fundamental purpose is to strategically partner with the University to fulfill its commitment to excellent teaching, innovative research, and the personal and intellectual growth of students in a diverse academic community. To fulfill this role, we oversee the strategic direction of IT for the University and provide core IT infrastructure, systems, and services. However, the delivery of superior IT services at an efficient cost is a collective activity that requires close alignment and collaboration (sometimes even federation) across our partner communities.

To support the University effectively, we will address, in collaboration with our IT partners, the priority areas below. Together, we must:

1.	**Enrich the learning and teaching environment**
2.	**Help our digital research community succeed in an environment of broadening computational landscape**
3.	**Improve the faculty experience**
4.	**Improve the student experience**
5.	**Enable administrative services to effectively and efficiently support our constituents**
6.	**Deliver reliable infrastructure services as we move to more agile solutions**
7.	**Manage the risks associated with information security**

The following pages provide a brief summary of each priority, including our long-range vision and important activities that we will undertake during the next 12–18 months.

Enrich the Learning and Teaching Environment

Northwestern IT has traditionally had a high level of engagement with faculty in supporting their use of technology to enhance teaching and learning. By strengthening our partnerships with academic deans, the Searle Center for Advancing Learning and Teaching, learning technologists, and IT partners across the schools, we will increase our capacity to advance institutional strategic initiatives (e.g., delivering more affordable instructional resources and developing a strategic framework for the assessment of learning). Additionally, by enhancing our learning environments (physical and virtual), we will promote a deeper level of student engagement for face-to-face, online, and blended courses. Finally, by expanding our capabilities in the areas of data access, analysis, interpretation, presentation, and policy, we will become leaders in assessing and improving the student learning experience and students' overall well-being.

LONG-RANGE VISION:
- Cultivate a culture of teaching innovation and practice that is informed by evidence-based research.
- Increase our capacity to support institutional strategic priorities in the area of teaching and learning.
- Promote a deeper level of student engagement and learning by enhancing the physical and digital learning environments.
- Build the University's capacity for learning analytics to better address questions regarding the students' learning experiences and overall well-being.
- Enhance the digital learning environment by implementing strategic improvements to the learning management system and other tools intended to enrich learning and teaching at Northwestern.

ACTIVITIES FOR THE NEXT 12–18 MONTHS:
- Provide greater incentives, rewards, and recognition for faculty experimentation (e.g., grant-funded projects that support the assessment and evaluation of technology-enhanced teaching and learning practices).
- Reconfigure the Educational Technology Advisory Committee (ETAC) to strengthen our partnerships across the University, and increase capacity to advance strategic priorities.
- Develop a Learning Spaces Working Group and Learning Applications Steering Committee that report to the reconfigured ETAC, and lead efforts to evaluate the physical and virtual learning environments, while establishing priorities for investment and improvement.
- Explore the applicability of the Open Educational Resources movement—or similar authoring and publishing initiatives—to provide easier access for students to instructional materials.
- Expand our capability (skill sets and resources) to support the discovery, interpretation, and course- and program-level utility of learning analytics.

Help Our Digital Research Community Succeed in an Environment of Broadening Computational Landscape

As Northwestern drives forward with aspirational goals related to research, the need for advances in and availability of IT services and support continues to grow and evolve. In addition to meeting the increasing demands for computational research support, we must intentionally increase our capacity for supporting faculty use of data. Data-aided research not only requires the ability to securely analyze, store, and share data, but more importantly, it requires available and skilled staff who can support researchers in deriving new knowledge. Common among all areas of research is a critical need to facilitate the adoption and usage of tools, methods, and technologies. We must also continue to identify ways to decrease the administrative overhead that comes with managing and administering research projects so that our faculty and students can focus more on discovery.

- Preserve and strengthen partnerships with the schools and leverage the Research Technology Advisory Committee to remain strategically aligned on priorities and to build capacity.
  - Increase support and services capacity to meet existing demand and expand support for a growing computational and data-aided research community.
  - Strike a balance between the development of on-premises research computing resources and the provisioning of resources beyond the campus.
- Ensure that students and faculty have access to appropriate technology infrastructure, services, and support staff needed to advance research, discover new knowledge, and educate students, peers, and society at large.
  - Provide an integrated ecosystem of computational, data, and network services and support that aligns with faculty research requirements.
  - Increase efficiency by providing usable systems and services that simplify adherence to regulatory requirements.
  - Collaboratively grow skill sets across the community in support of students and faculty conducting research.

ACTIVITIES FOR THE NEXT 12–18 MONTHS:

- Continue executing investments in campus research infrastructure and services (Quest/Computing, data storage, data centers, networking, etc.).
- Develop and share a seven-year reinvestment plan for infrastructure (including Cloud), services, and consulting/support for researchers.
- Perform an environmental scan to understand better the availability of data-related services provided across the institution, in support of academic research.
- Identify and improve efficiencies in process, policy, and approach in our research infrastructure, technology, and support services.
- Improve the security posture of research computing environments, including developing best practices and policies for services.

Improve the Faculty Experience

Our faculty—and those responsible for recruiting faculty—are increasingly reliant on information technology services, from the pursuit of candidates all the way through their retirement. Support for the faculty lifecycle has existed in pockets of the organization but often occurs in an uncoordinated manner. While progress has been made in targeted areas (e.g., research computing, faculty recruiting, and the Research Portal), this key area continues to exhibit significant service gaps.

LONG-RANGE VISION:

- Create a coordinated and integrated approach to faculty support systems that yields a set of services to support the full faculty lifecycle. Services should be in addition to the teaching and learning and research support already provided.
- Ensure all faculty have access to the information they need when they need it.
- Simplify access and usage for services that faculty rely on for teaching, research, and administration.
- Continue to reduce faculty effort on administration so that more time can be directed toward teaching, research, and other areas.

- Define an integrated faculty support application roadmap.

- Increase the integration and information support for currently targeted faculty solutions.

- Plan for the development and support of campus-wide faculty solutions.

Improve the Student Experience

The student experience encompasses all aspects of student life—academic and intellectual development, overall well-being, and social activities they engage in. Understanding the role that information technology plays in supporting students over the course of this lifecycle is essential to ensuring they have access to the services, information, and support they need. Student feedback suggests there are existing gaps in service delivery, including disparity in the level and type of support students receive across schools. There has also been a trend toward delivering customized applications within the schools, resulting in technologies that can be redundant in functionality, expensive to maintain, and create added complexity in managing the collection, sharing, and analysis of student data.

LONG-RANGE VISION:
- Ensure engagement with critical stakeholders (e.g., students, academic deans, IT partners, and Office of the Provost) in IT developments that support future student services.

- Provide students access to information that is critical, curated, relevant, and timely. Determine the right information through an analysis of student needs, and deliver it through an integrated portfolio of services that aligns with institutional- and school-based priorities.

- Address redundancies in applications and processes across the schools—multiple admission processes, the proliferation of customer relationship management platforms, and more—and prioritize the enhancement of the current portfolio of services and applications.

- Establish a recurring process for collecting student feedback on IT services and use the information to prioritize process improvements and service enhancements.

ACTIVITIES FOR THE NEXT 12–18 MONTHS:
- Develop an institutional diagram (process map) that outlines the various phases of the student lifecycle, including what information is essential at each phase and how that information is accessed, provided, and collected.

- Review the accessibility of Northwestern IT applications and websites—with Web Content Accessibility Guidelines (WCAG) 2.0 as our guide—to ensure equal access for all.

- Secure, synthesize, and analyze existing student feedback on their technology experience as a means to evaluate the next steps in improving their experience. Feedback examples include ECAR (Educause), Consortium on Financing Higher Education (COFHE) surveys, Course and Teacher Evaluation Council (CTEC) data, and more.

- Actively engage students in assessing the current portfolio of student IT services and determining priorities for future improvements.

Enable Administrative Services to Effectively and Efficiently Support Our Constituents

In partnership with the University's central administration offices and schools, Northwestern IT provides systems and services that enable the administrative function of the University. We intend to increase efficiencies by providing more integrated systems with streamlined functionality and information. With recent reductions in staff, there is an approximate 25 percent decrease in project capacity in the Administrative Systems area, meaning the FY19 project portfolio will be characterized by smaller run-based projects and significantly less development in new features and functionality.

LONG-RANGE VISION:

- Provide secure and effective information systems that support efficient, streamlined, and consistent business processes and high-quality information.

- Increase the business value of our administrative systems through improved usability, integration of independent information streams, and analytics platforms.

- Implement a technology transition to replace existing core enterprise systems with user-focused Cloud-based systems that are supported by mature identity management services and a robust data-governance practice. A multi-year roadmap already exists for the transition of current siloed systems into a planned application ecosystem with efficient integrations and accessible, connected information.

ACTIVITIES FOR THE NEXT 12–18 MONTHS:

- Increase the efficiency and effectiveness of our enterprise systems. Expanded activities during FY19 in portfolio management and DevOps practices will help advance this effort.

- Implement a data governance program to manage information assets more effectively.

- Plan for the Cloud transition by creating a fully costed, multi-year roadmap and process guidelines.

- Invest in our identity management technology, processes, and team to commence key foundational work for the Cloud transition.

- Complete an organization design and skills-gap assessment in support of our roadmap and agile development practices.

Deliver Reliable Infrastructure Services as We Move to More Agile Solutions

Infrastructure services provide the foundation for service across research, teaching and learning, and the administrative services University-wide. Cloud infrastructure and services offer significant agility, speed, and operational improvement opportunities beyond legacy infrastructure services. Our challenge is to continue providing an on-premises environment that is reliable and responsive, while increasingly augmenting it with an integrated Cloud-based service portfolio that is secure, scalable, and supportable. A key component of Cloud infrastructure development is support for the ongoing adoption of new digital tools and services, which are increasingly delivered by off-campus providers. Coinciding with the shift to Cloud services, we expect data generation, consumption, and sharing requirements to continue growing at a campus level, necessitating ongoing investment in our communications and collaboration environments, along with our data management and networking capabilities.

To allow our community to realize opportunities afforded by contemporary approaches to infrastructure services, qualitatively different skills and work processes are required. Developing these new skills and processes will enable teams to cultivate and provide the infrastructure that can respond to these increases in demand with greater agility, reliability, and alignment to changing business requirements.

Also, as the transformation to Cloud services continues, fostering governance will increase in importance in order to align policies, processes, and guidelines for adoption to ensure the demands of the campus community are met effectively and efficiently.

LONG-RANGE VISION:

- Provide technology infrastructure that can support the increasing demands for agility and responsiveness as Northwestern continues to drive toward integrated ecosystems across administrative, research, and teaching systems.

- Partner with business units and schools to develop and provide integrations into Cloud services and to leverage Cloud-based methodologies that enable the efficiencies and effectiveness of Cloud offerings.

- Identify and implement investments in on-premises data and networking facilities that support the growth in demand for data-intensive and real-time digital services.

ACTIVITIES FOR THE NEXT 12–18 MONTHS:

- Develop strategic partnerships with Cloud service providers.

- Continue developing Cloud-service frameworks that support DevOps and a Continuous Integration/Continuous Development of service delivery.

- Leverage automation across infrastructure and services to increase organizational efficiency and capacity.

- Modernize the infrastructure and its administration and measurement.

- Continue to foster Cloud governance, and engage the community in Cloud-service development through the Infrastructure Advisory Committee, Communities of Practice, and Cloud working groups.

- Cultivate Cloud skills and practices across the Northwestern IT workforce.

- Develop a capital infrastructure and operating plan that accounts for increasing use of Cloud-based services while keeping pace with the requirements for data and networking infrastructure.

Manage the Risks Associated with Information Security

Information is a critical asset, and how that information is managed, controlled, and protected has a significant impact on the delivery of services. These assets require protection from unauthorized use, disclosure, modification, damage, and loss, and they must be available when needed.

The decentralized nature of the University's computing environment is inherently difficult to manage and secure, as many departments operate their own systems and applications. To continue advocating this ecosystem while promoting a more holistic approach to information security, we must continue to develop security standards to reduce the risks commonly associated with heterogeneous computing environments.

LONG-RANGE VISION:

- Provide a coordinated and proactive risk-management program. We must make data owners and administrators more aware of the security risks that threaten their information assets, allow them to identify controls to reduce those risks, and help them understand what risks remain, even after implementing identified controls.

- Drive stakeholder behavior to fulfill information security responsibilities. We will help our community reduce the likelihood of data loss and disclosure of confidential, internal, and legally/contractually restricted data.

- Improve system and network services security, supporting a modern, defense-in-depth architecture and providing increased security of critical University services. Many initiatives and supporting projects are required to be in place according to federal regulations and various laws (HIPAA, FERPA, GLBA, GDPR, Illinois Personal Information Protection Act, and others).

- Provide endpoint management platform services for all University-funded desktops and laptops, allowing for imaging, asset, patch, and policy management.

ACTIVITIES FOR THE NEXT 12–18 MONTHS:

- Develop and obtain funding for seven-year information security and capital-spending plan.

- Perform a third-party information security risk assessment.

- Leverage Big Ten Academic Alliance shared services for incident detection and response (OmniSOC) and third-party security assessments through the implementation of Riskonnect.

- Continue to enhance and expand cybersecurity awareness and training.

- Review and update information security policies and standards.

- Complete deployment of multi-factor authentication and, where appropriate, extend to systems.

- Develop Cloud-security expertise, tools, and communications.

- Drive standardization of endpoint and vulnerability management tools, where appropriate.

Three Foundational Efforts that Will Continue for Northwestern Information Technology

In addition to the critical priorities above, Northwestern IT will continue to work with partners across our communities to advance foundational efforts in the following three areas.

Foster a Culture of IT Service Excellence

For Northwestern IT to succeed as a trusted strategic partner, we must be customer-centric and offer services that add value—at a reduced cost—while mitigating risk. The services we deliver should address clients' most important needs and include providing consultative support in areas where there is not a one-size-fits-all solution. We will foster a culture of IT service excellence by establishing leading practices that reinforce continuous service improvement and are driven by key performance indicators and embracing our clients' structured feedback.

LONG-RANGE VISION:

- Develop the leadership and management competencies necessary to facilitate continuous service improvement.

- Improve communications with key stakeholders regarding IT services (e.g., the delivery of new services, service enhancements, service disruptions, etc.).

- Maximize efficiency in the delivery of IT services through process assessment and optimization.

- Provide a standard platform for IT service management that addresses inefficiencies in communication and support across the schools and departments.

ACTIVITIES FOR THE NEXT 12–18 MONTHS:
- With the goal of delivering a consistent, high-quality customer experience, we will adopt standardized processes for how services are managed and communicated throughout the service lifecycle. Where possible, we will begin to transition from disparately managed support centers toward an integrated IT service desk.
- Develop a unified IT service catalog that provides a single common framework and approach for delivering services across the institution—a one-stop-shopping experience that enables customers to learn about service offerings and submit their requests.
- Audit existing communications and channels. Engage in conversations with technology leaders to identify areas of improvement related to the communication of IT services. We will continue to focus efforts on targeted messaging and campaigns that align with institutional, department, and school-based priorities.

Grow Northwestern IT's Talent

The Northwestern IT staff and their skills are one of our most important resources. As we continue to support a rapid technology transition, the adoption of Cloud services, and the expanding technical needs of the community, it is imperative that we invest in and develop our staff. Through Northwestern Program Review and employee engagement surveys, our staff sent a clear message that stresses the need for ongoing professional development, improved clarity around career paths, and consistency from managerial leaders to support critical efforts.

LONG-RANGE VISION:
- Ensure we have the right resources on the appropriate teams to support the University community in this rapidly changing technology landscape.
- With an increased demand for IT skills, we must provide strong managerial and technical career development paths for staff. This includes identifying challenging opportunities for growth alongside the appropriate processes for recruitment, development, succession, retention, and recognition.

ACTIVITIES FOR THE NEXT 12–18 MONTHS:
- Focus on expanding organizational capacity, as it is critical considering the scope and scale of change in each area and the need to maintain legacy solutions that are operating at high levels while new solutions are learned, built, and deployed.
- Develop our staff with new and enhanced skills and improve our culture with a focus on creating a more unified and collaborative workforce. This initiative requires focused training for existing staff, identifying career paths inside and outside Northwestern IT, team development opportunities, and improved training and coaching for managers and critical talent.
- Continue to utilize technologies—both new and already in place—to grow our organizational capacity. The use of technology to automate or provide self-service access to routine tasks currently done manually will free up resources for other more important and engaging tasks. Additionally, new, agile technologies will enable flexible application development and infrastructure provisioning. The focus of this change is in the following areas:
  - Definition of new organizational models and future skills
  - Identification of skill requirements by year
  - Analysis of skills gaps versus requirements
  - Planning for skills transition by job family, team, and individual
  - Targeted training and resource alignment

Develop a Comprehensive Financial Model for the Migration to Subscription-Based Services (e.g., Cloud)

The move to Cloud solutions will allow IT departments across the University to focus more on operational efficiencies, integrated services, and strategic innovation. However, the move also requires new understandings about financial resource planning for IT efforts.

IT funding models—both across higher education and at Northwestern—have for many years been a combination of capital funding for infrastructure deployments and operating funding for hardware and software maintenance and human resources. While this model continues, more of the current and future IT spend is transitioning to recurring funding because Cloud-based infrastructure and services are grounded in a subscription-cost model. This trend will only increase in time, and the level of Northwestern IT spending on Cloud or SaaS (Software as a Service) based systems will increase over the next decade as more of our on-premises devices, software resources, enterprise systems, and University data move to secure Cloud offerings. This promises to bring increased capability, more agility, improved integration of system, and better usability across all our IT services.

LONG-RANGE VISION:
- The details related to the reduction of capital requirements and of the increase in operating requirements need planning and an IT budget model developed that provides for these subscriptions and the necessary annual cost increases.
- Cost increases will occur based on annual pricing growth for the service and from higher levels of campus participation or general activity.
- Additional considerations for funding-model review are related to the current converged communications budget and the myriad of chargebacks for services delivered to schools and departments.

ACTIVITIES FOR THE NEXT 12–18 MONTHS:
- Develop and distribute a paper on the implications of moving from legacy IT systems and practices to Cloud-based IT services. We will focus on the impact to University IT funding models, budgets, staffing needs, and professional development efforts.
- Reflect the understandings of new IT funding models and new budget practices in the seven-year reinvestment plans developed by Northwestern IT for research computing, teaching and learning, infrastructure developments (compute, storage, data management), information security, and administrative systems.

Northwestern | INFORMATION TECHNOLOGY

it.northwestern.edu