

# Roger Williams University Information Technology Strategic Plan

SPRING 2019, VERSION 1.0





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# Introduction

Roger Williams University's primary goal is rooted in the promise of 'Building the University the world needs now.' Information Technology (IT) plays an integral role in the fulfillment of this promise by enabling, supporting, and aligning the use of technology for students, faculty, and staff in pursuit of this goal. Technology has become a fundamental part of the university's operations, teaching and learning environment, and the way we interact with the campus community.

The IT Strategic Plan serves as a forward-thinking roadmap and guide for the university's future technology investments, emerging technologies, innovation, and operational needs. It also speaks to the pervasiveness and importance of technology as it touches all areas of the University.

The plan was created by the RWU Information Technology Department working collaboratively with university governance bodies including, The University Technology Council, The University Technology Strategic Board and subcommittees. Additionally, input from the University community at large was gathered from electronic surveys and listening groups. This collective effort helped inform the plan and made it representative of the needs of all university constituents.

## PLANNING FRAMEWORK

The seven areas provide a framework for the RWU technology environment in order to consolidate and align critical technology initiatives under a singular strategic focus. All strategic areas have specific goals, initiatives, and timelines attached to them. As the technology landscape shifts frequently, the RWU IT Strategic Plan will be reviewed and revised annually with a 3-5 year outlook to account for the changes and nuances in the strategic areas and to address any reprioritizations.

The plan focuses on seven strategic areas:

- **Administrative Services**
- **Customer Service**
- **Information Security**
- **Infrastructure**
- **Innovation**
- **Instructional Technology**
- **Mobility**



## RWU IT VISION STATEMENT

The Information Technology Department delivers empowering teaching, learning, research, administrative, and communication technologies through a commitment to excellence in infrastructure, customer support, training, and technical leadership in fulfillment of the institutional mission and core values.

## RWU IT INCLUSION STATEMENT

The Information Technology Department understands and appreciates the important differences all people possess in culture, identity, perspective, and thought. Diversity make us stronger, both as individuals and as a community. Our pledge is to help create an inclusive culture for all by providing an environment where everyone feels respected and valued.

## RWU IT CORE VALUES

The values of the Information Technology Department align with the core values of the University directly and implicitly:

1. **Collaboration** – RWU IT is committed to working together with all campus constituents in order meet our common goals, through productive discussion, knowledge sharing and teamwork.
2. **Communication** – RWU IT creates good working relationships, transparency, trust, and accountability through consistent and reliable communication with the campus community.
3. **Customer Service** – RWU IT establishes a technology environment that is customer-centric through a cultural and operational emphasis on customer satisfaction based on measurable performance indicators.
4. **Excellence** – RWU IT holds our staff and services to the highest standard quality. We are dedicated to providing reliable, expedient, and valued services in the pursuit of operational excellence.
5. **Inclusion** – RWU IT respects and values differences in the campus community, both personally and professionally. We include varied perspectives, opinions, and engage in collaborative critical thinking in order to make informed decisions.
6. **Innovation** – RWU IT strives to create a technology environment where creativity is encouraged and developed through collaboration and access to technology resources.
7. **Security** – RWU IT values the protection and privacy of user data above all else. We will ensure appropriate preventive measures are in place to protect the confidentiality and integrity of data systems.





## ADMINISTRATIVE SERVICES

### Operational Excellence Through Technology

Administrative Services plays a vital role in introducing new technology solutions and how the University conducts business on a daily basis. It is important that RWU IT provide the tools necessary for effective, efficient, and expedient business processes that touch our students, faculty, and staff. Working in collaboration with academic and administrative departments throughout the University, RWU IT will support and enhance business process functionality, streamline services, promote accessibility, and comply with regulatory directives.

### Transforming the Enterprise Application Ethos

RWU IT will continue to migrate existing and prospective applications to cloud platforms. The focus will be on hosting, co-location, or Software as a Service (SaaS) delivery systems, in order to take full advantage of industry best practices, disaster and business continuity assurances, product upgrades, and web and mobile device accessibility. In addition, RWU IT will continue to promote secure and reliable internal and remote delivery of enterprise applications.

### Identity Management

As the complexity of systems increases, RWU IT will expand the use of access management tools such as single sign on, biometric credentialing, and mobile device tokenization, where appropriate, in order to provide easy and secure access to systems utilizing RWU credentials.

## CUSTOMER SERVICE

### Building a Customer-Centric Environment

RWU IT will strive to create a culture of continuous improvement relative to customer satisfaction. This will be done through the consistent monitoring and review of established customer Key Performance Indicators (KPIs), service level agreements, customer surveys, professional development, instituting industry customer service best practices, and communicating with customers regularly.

### Developing ONE IT Identity

As students, faculty, and staff support needs become more varied and complex, it's important we provide a singular and streamlined support model in order to give customers a seamless experience when addressing their issues. RWU IT will continue to improve customer satisfaction by working collaboratively with other departments in order to establish structures that give the customer one point of contact with multiple modalities (phone, email, text, etc.) for all IT-related issues.

### Improving Self-Service

RWU IT strives to enable customers to address issues quickly and efficiently via self-service tools. We will continue to develop our technical online knowledgebase, self-service password and identity management applications, and integrate self-service tools with existing and new enterprise systems.

## INFORMATION SECURITY

### Data Security Program

Securing the personal and sensitive data of our students, faculty, and staff is paramount. RWU IT has implemented a program designed to comprehensively protect our information resources. The program is based on industry standards and best practices including endpoint and infrastructure controls, policy and regulatory controls, information security training, ongoing data security communications, and varied online materials.

### Training

Security awareness and threat prevention training is integral to the overall success of the Data Security Program. RWU IT has enacted online security training modules using the industry recognized System Administration, Networking, and Security Institute (SANS). In combination with face to face awareness efforts and security policies, our goal is to minimize the risks associated with human error.

### Security Framework

RWU IT continually invests in security-related infrastructure in order to provide a state of the art architecture to combat potential data compromises and protect the integrity of university systems. RWU IT will protect data at rest and in transit based on The National Institute of Standards and Technology (NIST) framework.

## INFRASTRUCTURE

### Network Architecture

The demand for network resources in the form of Internet bandwidth, wifi, and network speed will continue to increase over time as more Internet-enabled devices come on the network. RWU IT must provide a scalable network infrastructure that will meet the demands of the RWU community today and into the future.

### Information Systems

Information systems are fundamental to the business of the institution. Recognizing the growing need to integrate best in breed technologies with core enterprise systems, RWU IT is committed to maintaining the data integrity of core enterprise systems and ensuring they are effective, secure, efficient and adapt with the changing needs of the University community.

### Cloud Strategy

Recognizing the value of cloud-based services relative to infrastructure needs, software maintenance, and remote access, RWU IT has adopted a cloud and mobile first strategy. We will leverage Software as a Service (SaaS), Infrastructure as a Service (IaaS), and Platform as a Service (PaaS) environments in order to provide the RWU user community with reliable, state of the art, and on-demand services.



## INNOVATION

### Building an Environment of Collaboration

RWU IT is committed to providing the RWU community with the technology support and tools to foster innovation through collaboration. We will work to provide platforms for intercampus and intracampus communication, as well as, tools for collaborating with colleagues across the globe.

### Creating Spaces for Experimentation and Research

In collaboration with other campus divisions, RWU IT will work to identify and source key physical and virtual workspaces for innovation. Maker Spaces and technology incubation environments will be implemented as part of the RWU IT Strategic Plan giving our community places for experimentation and deep thought.

## INSTRUCTIONAL TECHNOLOGY

### Creating the Learning Spaces for Tomorrow

Technology in the classroom has become one of the cornerstones of the teaching and learning experience. RWU IT is committed to outfitting classrooms and other learning and collaboration spaces with state of the art technology for in class and distance learning environments.



### Providing the Tools for Teaching and Learning

Providing the RWU community with industry best in breed tools for instruction and learning is core to the mission of RWU IT. We will continue to improve our Learning Management Systems (LMS), Student Information Systems (SIS), and classroom tools with a framework that gives flexibility and access.



## MOBILITY

### Mobile First Strategy

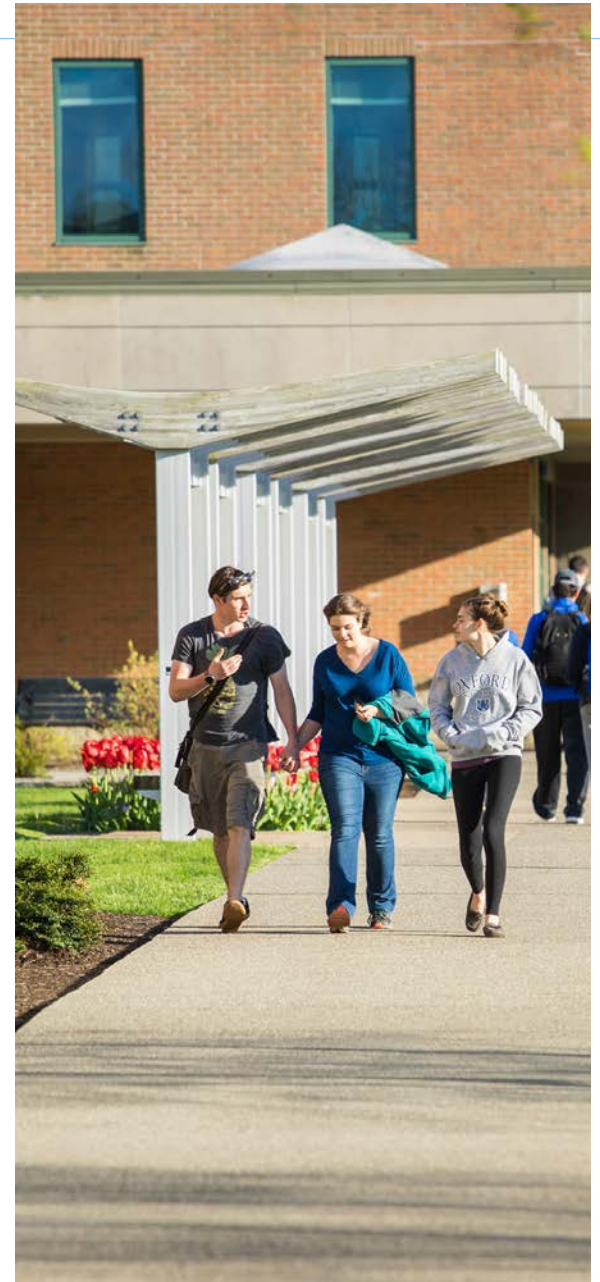
RWU recognizes the growing need to provide access to university systems and tools over mobile platforms. We seek to establish a user-friendly and secure mobile interface for all new and upgraded university systems and applications.

### Secure Access All the Time and From Anywhere

RWU systems should be accessible any time, anywhere, and from any standard platform. RWU IT aims to establish a secure mobile framework in which the RWU community can securely access university systems and information from their mobile devices from anywhere in the world. Our continued cloud computing and mobile application management approach will ensure this.

### Mobile Apps

The RWU community increasingly conducts its every day activities through mobile devices. RWU IT strives to provide a personalized and streamlined mobile experience when accessing what the community uses, including dining services, campus maps, directories, athletics, student information systems, and other information vital to the business of the University.







## AREA ONE: ADMINISTRATIVE SERVICES

### Goal

Design and deliver an effective and efficient information framework that supports the business needs of the University.

	OBJECTIVE	INITIATIVES	TIMEFRAME
1	Increase Cross Platform Integration (Automation)	<ul style="list-style-type: none"><li>• Work collaboratively with business units to identify manual processes</li><li>• Develop and utilize APIs</li><li>• Enhance interfaces between systems to optimize efficiency, ensure sustainability, and guarantee integrity of data</li><li>• Implementation of Ellucian Ethos data model for higher education</li></ul>	FY2021
2	User Experience, Mobile, Self-Service, and Accessibility	<ul style="list-style-type: none"><li>• Continue to build solutions (i.e. RogerCentral) that allow the campus community to perform self-service tasks at any time, from anywhere, using any device</li><li>• Create a strategy emphasizing business process simplification and operational efficiency</li><li>• Mobilize applications (mobile first strategy)</li></ul>	FY2019-2020
3	Conduct Trainings	<ul style="list-style-type: none"><li>• Provide technology support and instruction on the suite of ERP applications</li><li>• Develop a deeper level of departmental expertise in ERP system usability</li><li>• More online videos</li><li>• Increase data reporting use using business intelligence and analytic tools</li><li>• Develop Wiki for ERP items</li></ul>	FY2019-2021

	OBJECTIVE	INITIATIVES	TIMEFRAME
4	Improve Infrastructure	<ul style="list-style-type: none"> <li>Evaluate third-party, best-in-breed applications and determine if they are a fit for RWU</li> <li>Reexamine existing applications and consolidate when possible</li> <li>Conduct a functional and technical system/user needs assessment</li> <li>In collaboration with the IT Projects Steering Committee, review and prioritize university projects and initiatives</li> </ul>	FY2019-2021
5	Digital Process Improvement (eliminate paper)	<ul style="list-style-type: none"> <li>Streamline workflow and automate business processes to improve business efficiency and reduce the use of paper</li> <li>Recommend a complete document imaging/document management solution by fall 2021</li> </ul>	FY2019-2021
6	SaaS (SIS)	<ul style="list-style-type: none"> <li>Develop cloud business use case</li> <li>Enhance business continuity and disaster recovery</li> <li>Flexibility and scalability</li> <li>Shifting responsibility and redistribution of resources</li> <li>Work anywhere</li> <li>Recommend a complete cloud-based SIS solution by fall 2021</li> </ul>	FY2022
7	Promote Campus Efficiencies and Effectiveness	<ul style="list-style-type: none"> <li>Collaborate with business units to optimize and standardize business processes to achieve efficiency</li> <li>Implement business process governing system</li> <li>Establish key performance indicators</li> <li>Increase use of delivered functionality in enterprise applications (remove customizations)</li> <li>Develop more transparent policies and procedures</li> </ul>	FY2020-2022



## AREA TWO: CUSTOMER SERVICE

### Goal

Create a customer focused service environment that fully supports the technology needs of the RWU community.

	OBJECTIVE	INITIATIVES	TIMEFRAME
1	Improve Communication Among Students, Faculty and Staff	<ul style="list-style-type: none"> <li>• Create a plan and goals to increase RWU community social media engagement</li> <li>• Provide tools, training and templates to staff in order to increase video communication, especially for training and documentation</li> <li>• Use website, email, blogs and/or social media to communicate projects and success stories</li> <li>• Deploy an internal IT communication strategy to notify all staff in a timely manner of outages and incidents impacting IT services</li> <li>• Use IT supervisor's monthly meetings to increase knowledge of unit projects and responsibilities</li> <li>• Engage with students, faculty, and staff through staff participation in forums, groups, and committees.</li> <li>• Establish procedure to review feedback from ticket surveys</li> </ul>	FY2020-2022
2	Improve the Help Desk Experience	<ul style="list-style-type: none"> <li>• Continue to grow and refine self service (Tier 1) with knowledge-based explanations and training materials</li> <li>• Train staff in all areas on remote management tools</li> <li>• Refine and fully formalize staff and student staff customer service training program</li> <li>• Establish monthly meetings (support services staff and student employees) to promote new ideas and improvements to the service desk experience</li> </ul>	FY2020-2021

	OBJECTIVE	INITIATIVES	TIMEFRAME
3	Improve the Service Culture	<ul style="list-style-type: none"> <li>• Provide at least one soft service training per year to all staff</li> <li>• Continue to provide conflict resolution training to new staff</li> <li>• Enhance and update SLA yearly</li> <li>• Inform IT staff on customer service expectations, including SLA procedures</li> <li>• Provide social opportunities for staff from different units to interact</li> <li>• Gain executive support for cultural change enhancement</li> <li>• Provide four hours a month for each staff member to engage in free or for fee professional development</li> <li>• Continued staff recognition and awards</li> </ul>	FY2019-2021



## AREA THREE: INFORMATION SECURITY

### Goal

Create a security architecture and program that comprehensively asserts confidentiality, integrity, and availability to the University's information assets.

	OBJECTIVE	INITIATIVES	TIMEFRAME
1	Create Integrated Security Policies, Procedures, and Protocols	<ul style="list-style-type: none"> <li>Define a Defense-in-Depth architecture [FY20 V1]</li> <li>Sponsor cross-functional security advisory group to revise IT policies [quarterly]</li> <li>Complete PCI Self Assessment Audit [annually]</li> </ul>	FY2019-2022
2	Data Security Training	<ul style="list-style-type: none"> <li>Cyber awareness campaign [Oct.-FY20]</li> <li>Launch SSI training curriculums for PII and PCI [Q4-FY19]</li> </ul>	FY2019-2022
3	Biennial Assessments and Audits	<ul style="list-style-type: none"> <li>Network [internal/external] PEN testing [FY19]</li> <li>Assess critical security controls [Admin, Technical, and Physical] against needed control objectives [FY20]</li> <li>Policies and procedures compliance audit</li> </ul>	FY2019-2020
4	Continuous Security Infrastructure Enhancement	<ul style="list-style-type: none"> <li>Roll out [SIEM]: Security Information and Event Manager [FY20]</li> <li>Rapid Data Discovery and Classification - SSI Risk Mitigation [FY20-21]</li> <li>Data encryption: laptop, desktop and storage [FY21]</li> </ul>	FY2020-2022

## AREA FOUR: INFRASTRUCTURE

### Goal

Develop a robust and reliable computing infrastructure environment that serves the changing needs of the campus community.

	OBJECTIVE	INITIATIVES	TIMEFRAME
1	Improvements to Wide Area Network (WAN)	<ul style="list-style-type: none"> <li>Upgrade to 1GB lateral from the OSHEAN network to the RWU network for Almeida Apartments</li> <li>Upgrade the software code for the checkpoint firewalls and add 10GB interface cards</li> </ul>	FY2020
2	Continuous Improvement of Wireless Network (part of the LAN)	<ul style="list-style-type: none"> <li>Upgrade campus wireless standard to 802.11 ax (WiFi 6)</li> <li>Install Network Access Control and policy management for secure network BYOD</li> <li>Upgrade or add to areas with limited wireless reach</li> </ul>	FY2020 - FY2021
3	Continuous Improvement of the Local Area Network	<ul style="list-style-type: none"> <li>Upgrade campus core switches to newest standard and 10GB capacity to buildings</li> <li>Upgrade Architecture and Engineering to 10GB interfaces</li> <li>Upgrade remaining buildings to latest switch standards</li> </ul>	FY2020 - FY2021

	OBJECTIVE	INITIATIVES	TIMEFRAME
4	Upgrade rCloud environment	<ul style="list-style-type: none"> <li>Add latest standard GPU and servers to user pool to insure the finest virtual desktop experience</li> </ul>	FY2020
5	Replicate Equipment at DR Site for More Robust and Stable True Disaster Recovery	<ul style="list-style-type: none"> <li>Add VXRail storage to Andover, Massachusetts, DR location for true replication of servers</li> </ul>	FY2021
6	Improvements to Telecommunication Systems	<ul style="list-style-type: none"> <li>Upgrade aging telephone system to modern solution either fully hosted or more likely a hybrid solution</li> <li>Upgrade old fiber to Willow Hall and test all fiber for use in a 10GB environment</li> </ul>	FY2021



## AREA FIVE: INNOVATION

### Goal

Create a forward looking culture of ideas and thought leadership through collaboration and leadership.

	OBJECTIVE	INITIATIVES	TIMEFRAME
1	Build an Environment That Promotes Innovation Through Collaboration	<ul style="list-style-type: none"> <li>• Develop a student-based coding club for app development</li> <li>• Create faculty technology development group</li> <li>• Establish faculty research group</li> </ul>	FY2020-2021
2	Create Spaces for Experimentation and Research	<ul style="list-style-type: none"> <li>• Create a university maker space with physical and virtual resources and tools for collaboration</li> <li>• Establish eSports space for gaming club activities</li> </ul>	FY2020-2022
3	Explore New Endeavors	<ul style="list-style-type: none"> <li>• Implement biometric credentialing for various systems throughout campus (i.e. door locks, student accounts)</li> <li>• Use Amazon Alexa to enhance student experience in dormitories</li> <li>• Collaborate with dining services to integrate robotic interactivity with offerings</li> <li>• Create an IT endowment fund</li> <li>• Evaluate and recommend opportunities for AI across campuses</li> </ul>	FY2020-2022
4	Process Development	<ul style="list-style-type: none"> <li>• Establish an inclusive institutional process for developing, vetting, and sourcing innovative initiatives</li> <li>• Create metrics to evaluate the success of innovative initiatives</li> </ul>	FY2020

## AREA SIX: INSTRUCTIONAL TECHNOLOGY

### Goal

Construct and nurture a teaching and learning environment that enriches the student experience.

	OBJECTIVE	INITIATIVES	TIMEFRAME
1	Classroom Technology Improvements	<ul style="list-style-type: none"> <li>Establish HDMI as a standard and update any rooms that aren't HDMI capable</li> <li>Replacement plan (see item 2)</li> <li>Remove VHS from classrooms and sunset VHS support</li> <li>Add wireless projection capabilities in all classrooms and meeting spaces</li> <li>Work with schools and departments to identify, recommend, and design innovative learning spaces</li> </ul>	FY2020-2022
2	Upgrade and Replacement Policy	<ul style="list-style-type: none"> <li>Continue to request funding yearly for current four-year replacement plan for classroom upgrades</li> <li>Build an ongoing replacement plan which establishes a yearly funding structure for classroom technology</li> <li>Enhance classroom technology standards</li> </ul>	FY2018-2021
3	Build a Support Model for Distance Education Classrooms	<ul style="list-style-type: none"> <li>Create survey and collect feedback from faculty using distance education classrooms</li> <li>Establish training program for faculty using distance education classrooms and equipment</li> <li>Create documentation and establish an area of the knowledge base with materials and support information</li> <li>Install confidence monitors in all distance education classrooms</li> </ul>	FY2020

	OBJECTIVE	INITIATIVES	TIMEFRAME
4	Crestron Fusion Software	<ul style="list-style-type: none"> <li>• Set up Fusion server</li> <li>• Identify what needs to be tracked and build reports</li> <li>• Phase 1 rollout: deploy Fusion to 5-7 rooms.</li> <li>• Train staff on using reporting and remote tools</li> <li>• Phase 2 rollout: deploy to remainder of rooms that are Fusion-ready</li> <li>• Phase 3 rollout: establish Fusion deployment as standard in all new and retrofit classroom projects</li> </ul>	FY2019-2020
5	Develop a Training Program for Use of Classroom Technology	<ul style="list-style-type: none"> <li>• Continue to update and distribute training materials through knowledge base</li> <li>• Create a curated list of instructional videos to be available through the knowledge base</li> <li>• Hold trainings for Bristol faculty at the beginning of the fall and spring semesters.</li> <li>• Partner with University College to provide training at least two times a year as part of their faculty training initiative</li> <li>• Continue to hold individualized and group trainings on demand</li> <li>• Reduce requests for onsite room assistance by 25%</li> </ul>	FY2020
6	Process Development	<ul style="list-style-type: none"> <li>• Establish an inclusive institutional process for developing, vetting, and sourcing innovative classroom initiatives</li> <li>• Create metrics to evaluate the success of innovative initiatives</li> </ul>	FY2020



## AREA SEVEN: MOBILITY

### Goal

Cultivate a model where information can be accessed securely from any Internet connected device.

	OBJECTIVE	INITIATIVES	TIMEFRAME
1	Continue Mobile First Strategy	<ul style="list-style-type: none"> <li>• Ensure all new applications and application upgrades have a mobile component</li> <li>• Develop strategies to promote existing mobile applications</li> <li>• Ensure all university websites render on mobile devices</li> <li>• Provide recommendations for student mobile apps in order to enhance student self-service</li> </ul>	FY2019-2022
2	Secure Access to RWU Information Anytime from Anywhere	<ul style="list-style-type: none"> <li>• Expand MDM to additional university enterprise platforms</li> <li>• Develop methods for enforcing the data classification policy</li> </ul>	FY2020-2022
3	Mobile Apps	<ul style="list-style-type: none"> <li>• Aggregate disparate campus mobile apps</li> <li>• Utilize student club to develop new campus apps</li> <li>• Hire mobile app developer</li> </ul>	FY2019-2022

A special thank you to all those involved in the IT strategic planning process. The plan is the result of a collaborative effort replete with rich and insightful information from a variety of sources throughout the Roger Williams University community. The Information Technology Department is proud of the strong relationships we've built with all our constituents and look forward to continued productive partnerships.

**A very earnest expression of gratitude to the following groups for their hard work on the plan:**

- The Technology Strategy Board
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- The Technology Council
- IT Leadership Team
- The Roger Williams University Marketing and Communications Department

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