



**2017 - 2021**



## **Technology Strategic Plan**



## TECHNOLOGY STRATEGIC PLANNING

The road to developing this technology strategic plan has been long and winding, but hopefully the result has been worth the many hours of deliberation, debate and reflection involving hundreds of stakeholders. The patience, collaboration, and persistence of the workgroup that developed the final draft of this plan is to be recognized and profusely thanked.

Recognizing the changing priorities in the world around us, ITS leadership and the Technology Council kicked off an update to the Technology Strategic Plan with a planning session held in February 2014. The session included the college presidents, led by Gartner, with a focus on creating a strategic capability map. Work on that plan continued through 2014 with additional outreach and planning sessions including a variety of stakeholders. In late 2014 an initial draft plan was shared with the Technology Council.

At the same time, work was underway to develop the next VCCS state-wide strategic plan, and in 2015 the State Board for Community Colleges adopted *Complete 2021*, its next six-year plan. The plan's single goal is this:

*Virginia's Community Colleges will lead the Commonwealth in the education of its people by tripling the number of credentials awarded for economic vitality and individual prosperity.*

Following that bold vision, the information technology community took another year to revisit every aspect of its work in order to develop a plan to support the State Board's goal. Much time was spent in subsequent visioning sessions and frank focus sessions, in reviewing the VCCS six-year academic and financial plans that support *Complete 2021*, in talking to many outside consultants and listening to constituents, and in taking a hard look at current planning processes.

As a part of that continuing examination, a technology SWOT analysis provided the following eye-opening results:

- Weaknesses: IT is not positioned as a strategic partner in decision making; there is a lack of communication, governance and innovation; there is a need for better customer-focused tools; and there was a lack of action, significantly due to the resistance to change.
- Threats were seen as: lack of a unified vision, competing priorities, lack of funding and resources, and inability to remain current or relevant.
- Strengths were seen as: enterprise operations, shared services, significantly reduced technology costs to colleges, and dedicated staff.

Even with all of those conversations occurring, there was yet another effort underway. The #2 "Big Idea" emanating from the Chancellor's Re-engineering Task Force was to "implement shared services". As a result, the completion of a system-wide benchmarking and opportunity assessment project produced 24 recommendations to improve business processes and

operations within the VCCS, leading to the formation of the WorkSmart Collaborative. As a result of those efforts, a shared services center was established to process transactions and provide back office services for the system in several areas, initially targeting several human resources, finance and information technology functions. The big difference with this initiative though was that the services weren't "centralized" under the leadership of the system office. Instead, the shared services were to be located in a standalone center and would be governed by the customers – an executive council and management council – that would identify what services would be provided, at what price, and with what quality. While information technology services were initially targeted as a function for the SSC, with the official opening of the Shared Services Center (SSC) in July 2016, the role of information technology to-date has been solely focused on supporting creation of the Center.

With all of these discussions and changes taking place, capturing the innovative and creative ideas in a strategic plan for technology was a challenge. That was the charge given to a workgroup of college CIOs and system office staff in 2015. Revitalized early in 2016 with additional members, the first effort of the workgroup was to create a vision statement:

*The Virginia Community College System will create and sustain a world-class information technology and telecommunications environment that:*

- *Fosters and expands access to exemplary teaching, training and learning; and,*
- *Supports the high-quality, customer-centered business functions that meet individual and organizational needs.*

The vision was focused on supporting both the VCCS mission to educate and train the citizens of Virginia, but to also support the business functions that are behind the scene. In other words, technology and its related infrastructure need to support faculty in the classroom as well as staff in the back-office doing functions such as payroll and year-end financial reporting. The strategic use of technology should spur innovative thinking, enable more efficient workflow, foster greater student engagement, and support improved rates of student success.

The technology mission statement from prior years was then updated to include reference to security:

*Information Technology in the Virginia Community College System is committed to providing reliable and secure information technology solutions to support academic, administrative, and workforce services while delivering excellence in customer service.*

A third aspect of the workgroup's efforts was to develop guiding principles.

*In order to achieve this vision, the information technology leadership at the colleges and System Office will strive to ensure that funding models, staffing proposals, technology plans, and supporting decisions:*

- *encourage creative and critical thinking in the creation of technology services and solutions;*
- *promote collaboration through sharing information and building effective partnerships with key stakeholders;*
- *support student success initiatives and tripling of the number of credentials;*
- *provide necessary support for high-quality, cost-effective, customer-centered business functions;*
- *foster the engagement of alumni; and,*
- *ensure the integrity, security and availability of the technology infrastructure and services.*

With these six principles in hand, the workgroup benchmarked each of its goals against the principles to make sure that they were in line with what it wanted this plan to accomplish – a focus on creativity, collaboration, student success, the importance of all partners and customers, accountability, and security.

Each of the goals and their related strategies will be addressed in more detail, but below is a brief summary of the technology strategic plan goals:

- #1. Revitalize and foster a shared governance structure that ensures system-wide endorsement and support of IT services and infrastructure necessary to achieve Complete 2021.*
- #2. Strengthen relationships with institutional partners.*
- #3. Develop a formal model to anticipate, plan for, and facilitate implementation of future technology needs and solutions.*
- #4. Provide high-quality, cost-effective, customer-oriented, service offerings that promote success and support institutional business functions.*
- #5. Ensure the integrity and security of data, technology infrastructure, and services.*
- #6. Foster development of world-class, motivated, IT staff members who are lifelong learners, agile problem solvers, and collaborative leaders.*

This plan is a significant departure from previous plans. In some ways it is an interim or bridge strategic plan as it poses strategies to change how technology, its constituents and partners work together, how they will plan for the future, how progress will be measured, and how significant risks will be addressed.

In keeping with goals of the plan, drafts of the plan were widely shared and discussed with many partners and constituents and suggestions were addressed with additions or changes to the draft before presentation to the Advisory Council of Presidents for endorsement.

The workgroup had significant discussion about which goals might be considered more important than others, but in the end it was determined that because of the interdependencies

among the goals, that perhaps the timeline and order of the goal roll-out was really the best indicator of priorities in order to achieve all of the goals.

If embraced and thoughtfully implemented, the plan can have significant ripple effects on all that happens in the VCCS IT world. While all of the goals and strategies can't be implemented at once, the hope is that over the next four years both the delivery of IT services and the perceptions of partners that receive the services will be significantly improved.

Next steps include incorporation of the strategic plan goals and strategies into the IT Chancellor's Expectations, with dates and responsibilities for carrying out the Plan as well as related metrics. It is anticipated that future updates and revisions to this plan will occur in parallel with the VCCS academic and financial six-year plans.

Following are the detailed goals, strategies and tactics of the 2017-21 Technology Strategic Plan.

## Technology Strategic Plan

There are six goals in this plan. The first goal is a transition goal – a goal that bridges where IT governance structure is now to where it needs to be.

**Goal One: *Revitalize and foster a shared governance structure that ensures system-wide endorsement and support of IT services and infrastructure necessary to achieve Complete 2021.***

The primary focus of this goal is to create a “shared governance structure” to ensure that together IT and its partners know what the priorities are to support *Complete 2021*, so that they know what the resources are that need to be in place to support those priorities, and together they create a structure and synergy to accomplish much more than they will working independently. The Vice Chancellor will provide leadership for technology at the System Office, and with the Colleges. New partners need to be at the table, including the Shared Services Executive Council and the Enterprise Portfolio Investment Council (EPIC), and new funding realities need to be addressed, all calling for a more collaborative and strategic environment and structure.

### Strategy and Tactics

Strategy 1: *Revitalize the technology governance structure to achieve alignment among academic, administrative, workforce and information technology partners in all strategic planning efforts.*

- Tactic 1A – Restructure the Technology Council framework to promote system-wide collaboration and improve communication channels.
- Tactic 1B – Work with strategic partners to improve communication channels in other governance arenas.
- Tactic 1C – Collaborate with strategic partners to leverage resources, including the technology fee and equipment trust funding, in the most cost-effective manner to achieve system-wide goals.
- Tactic 1D – Ensure that the Shared Services Executive Council and the Enterprise Portfolio Investment Council (EPIC) become full partners in strategic planning efforts.

<b>Goal Two: <i>Strengthen relationships with institutional partners.</i></b>
-------------------------------------------------------------------------------

In tandem with the first goal of revitalizing the governance structure, system-wide information technology services wants to build on and strengthen relationships with all of its partners and stakeholders, both internal and external. The idea is for these first two goals to happen in parallel through a series of conversations among representatives of technology and its stakeholders. A key concept of this goal is to establish metrics in the context of shared priorities and expectations, and to use those metrics to drive a new level of accountability among all partners.

### **Strategy and Tactics**

Strategy 2: *Develop and sustain collaborative relationships with all VCCS partners and stakeholders.*

- Tactic 2A – Create a customer-centric culture that sustains and consistently improves the quality of existing and new IT services.
- Tactic 2B – Develop a process to identify shared operational priorities and strategies for IT services.
- Tactic 2C – Establish metrics in the context of shared priorities and expectations rather than technology operations and infrastructure.
- Tactic 2D – Collaborate with institutional partners to identify metrics to be used to measure efficiency and effectiveness of service delivery for all students, faculty and staff.
- Tactic 2E – Meet with key institutional partners on an annual basis to report on progress, review priorities, and gather feedback.

**Goal Three: *Develop a formal model to anticipate, plan for, and facilitate implementation of future technology needs and solutions.***

It will take some time to develop the baseline data and information needed to anticipate, plan for and facilitate implementation of future technology needs. Diligence in establishing a timeline and dedicating resources to achieve this goal and these strategies will be necessary to ensure the success of later goals, as will inclusion of partner representatives throughout the process. Building a formal research function that straddles multiple disciplines will be a challenge as well, but without a cross-functional, integrated focus, the research function will not adequately serve the needs of all partners.

The VCCS can spend its resources by design, leveraging its size and many resources, or it can spend its limited resources by default without making any progress. If deployed well, resources dedicated to these tasks will provide a significant return on investment.

**Strategies and Tactics**

*Strategy 3: Establish a foundation for future innovation through a disciplined process of business case/mission analysis supported by strategic roadmaps.*

- Tactic 3A – Create life cycle plans, including metrics to measure total cost of ownership, for all enterprise systems and services to anticipate when they need to be replaced from a functional, programmatic, technical and financial perspective, identifying those that are mission-differentiating and mission-critical, leveraging those with a positive value and utility and eliminating those that no longer provide a strategic value.
- Tactic 3B – Develop strategies within the annual technology plans for the colleges and enterprise-wide services to continuously improve and reduce life-cycle costs while maintaining currency of existing services.

*Strategy 4: Build a formal Advanced Technology Research & Development function in collaboration with strategic partners in order to deliver robust services and solutions to meet partner and student needs and expectations in a pro-active, timely, cost-effective manner.*

- Tactic 4A – Develop a process to identify, understand, anticipate, and support colleges' needs for technology solutions in all functions.
- Tactic 4B – Research and identify strategies to optimize service delivery and manage costs for all IT solutions and services, including as a mandatory first step, a review of existing resources that can be leveraged to meet those needs.
- Tactic 4C – Monitor and research new technology solutions to meet the goals of the VCCS.
- Tactic 4D - Ensure that advanced technology research becomes a continual process employed by the VCCS in all aspects of strategic planning.

*Strategy 5: Implement a reliable, extensible, and flexible architecture for the VCCS.*

- Tactic 5A – Research sourcing options (cloud, greater centralization of services, shared services, etc.).
- Tactic 5B – Provide an exit strategy for all application technology platforms that safeguards the ownership, history and integrity of VCCS data.
- Tactic 5C – Plan, develop, and deploy the technology architecture using system procurement strategies.

**Goal Four: *Provide high quality, cost-effective, customer-centered service offerings that promote student success and support institutional business functions.***

Key concepts in the strategies below are: use of multi-function/multi-college teams, developing “academic and administrative technology service standards,” conducting “technology assessments” against those standards, identifying costs to meet the standards, and developing creative, cost-effective strategies and funding models to meet the standards.

Research and data-based decision making, including cost benefit analyses, will be critical foundations to each of the strategies, as is a willingness to examine any and all opportunities for improving the efficiency and effectiveness of services. And this can’t just be an initiative driven by IT – it has to be a collaborative, customer-centered effort.

### **Strategies and Tactics**

*Strategy 6: Complete a comprehensive technology assessment for each college, the System Office, the Shared Service Center, and the enterprise operations.*

- Tactic 6A – Use multi-function teams comprised of college and system office staff to develop academic and administrative technology service standards, as well as best practices necessary to achieve the VCCS and IT mission, vision and goals.
- Tactic 6B – Complete academic and administrative technology assessments for all colleges, the System Office, the Shared Services Center, and overall VCCS IT technology infrastructure, services and best practices in the next two years to assess the ability and readiness of the VCCS to achieve those standards.
- Tactic 6C – Determine the costs to achieve the technology service standards and validate the metrics and costs in the Technology Funding Model as the method for meeting those needs.
- Tactic 6D – Implement multi-directional communication strategies to convey and discuss results of technology assessments, to better understand the contributions and costs of technology, and to better align expectations with available resources.

*Strategy 7: Promote and support data-based decision making in strategic planning efforts.*

- Tactic 7A – Work with institutional partners to determine the key resources, data, and processes needed to support system-wide informed decision making.
- Tactic 7B – Identify key metrics for IT decision making.
- Tactic 7C – Provide a platform and or a set of tools for performing analysis on key IT metrics as well as those needed by partners.
- Tactic 7D – Benchmark IT performance metrics against national data.

*Strategy 8: Be prudent stewards of technology resources.*

- Tactic 8A - Develop a plan to drive down the costs of commodity services through third party services, shared services, enterprise services, use of cloud services, or other means.

- Tactic 8B – Revise funding models to provide incentives and rewards for colleges and System Office to pursue innovative collaboration that results in reduced costs and better services.
- Tactic 8C – Develop strategic partnerships with vendors and value added resellers identified as key solution providers for the VCCS.

*Strategy 9: Conduct a comprehensive business process review for all enterprise applications and services.*

- Tactic 9A – Examine campus-based shadow IT systems and map them to ERP processes to determine whether standard solutions are available at the enterprise level.
- Tactic 9B – Use business process maps to identify areas that could benefit from creating standard and repeatable processes and map them out with the goal of providing guidance to institutions on how to implement and leverage them.
- Tactic 9C – Develop a single set of business processes and supporting work flows where feasible and cost effective.

*Strategy 10: Identify and examine opportunities and strategies for better collaboration to improve efficiency and effectiveness of services and operations.*

- Tactic 10A – Identify all existing and necessary services and applications that are currently or could be offered in a collaborative environment as a partnership, fee-for-service, shared service, or through other cost-efficient and effective models, including the use of external providers.
- Tactic 10B – Develop strategies and priorities to expand existing collaborative programs and implement new shared services, other collaborative models, and applications as they are identified and deemed to be more cost effective, efficient and beneficial to the VCCS.

**Goal Five: *Ensure the integrity and security of data, technology infrastructure, and services.***

This plan includes an elevated focus on security issues necessary to protect all VCCS data and reduce risk. Due to the traditional culture of openness and transparency in higher education, ensuring the confidentiality, integrity, and availability of our data, infrastructure and services is a constant, ongoing challenge. Being entrusted with student, faculty, and staff personally identifiable information creates an elevated focus on security issues in an ever-changing environment that requires investments in new technologies, and developing new skillsets to confront these risks and threats. The costs of not addressing these risks and threats are potentially much higher than the cost of addressing them, as seen with data breaches and court cases in the news on a regular basis. As such, it is imperative that any strategic plan assess these risks, develop strategies to mitigate them, and tactics to effectively and efficiently audit their effectiveness.

**Strategies and Tactics**

*Strategy 11: System Office IT will work with Internal Audit and other institutional partners to develop, understand, and address VCCS strategic risks, technology implications, and related solutions on an annual basis.*

- Tactic 11A – Ensure System Office, Shared Service Center, and all colleges are in full compliance with the VCCS Information Security Program.
- Tactic 11B – Conduct security/risk assessments of all business services and systems.
- Tactic 11C – Implement risk management and information security best practices to protect institutional resources/data, and respond to regulatory compliance mandates.
- Tactic 11D - Implement continuity of operations best practices to ensure continuous availability of systems, data backup and recovery technologies, and redundancy and testing of systems for disaster recovery.
- Tactic 11E – Ensure compliance to accessibility standards for digital content.

*Strategy 12: Research, develop and implement new security standards and technologies.*

- Tactic 12A – Utilize audit and risk assessment findings to guide implementation of new technologies that will reduce security risk.
- Tactic 12B – Collaborate with VCCS security specialists to ensure applications and data, technology, and facilities are meeting security standards.

**Goal Six: Foster development of world-class, motivated IT staff members who are lifelong learners, agile problem-solvers and collaborative leaders.**

The need to build, support, recognize and reward the technology staff responsible for implementing this plan is integral to the success of the plan. Colleges and System Office ITS will achieve national recognition among community colleges for information technology services. The VCCS has experienced the graying of the workforce and many individuals have retired or are planning to do so shortly. New methods and tactics for recruiting today's workforce and strategies for developing and retaining them are needed. Key to job satisfaction is growth opportunities made available through professional development and recognition. Today's workforce demands a different type of work environment, one of collaboration that allows more flexibility in work assignments and scheduling, and provides just in time training and certifications that provide the knowledge to complete assignments and grow professionally. Today's knowledge worker enjoys instant feedback and immediate recognition. Up and coming leaders need to learn and ply skills to deal with this new reality in order to create the IT workforce of tomorrow.

### **Strategy and Tactics**

***Strategy 13:*** Develop a professional development program and recognize the achievements of technology staff.

- Tactic 13A – Develop formal, budgeted professional development programs internal to the VCCS focusing on leadership, mentoring, credential attainment, conference participation and life-long learning. Include achievements from these programs in the annual evaluation process.
- Tactic 13B – Create VCCS badging and credentialing to better recognize technology professionals, possibly through a partnership with Workforce Development.
- Tactic 13C – Provide clear career pathways for IT staff that allows staff the opportunity to explore specialties like security, PeopleSoft ERP Analyst, programming or systems administration.
- Tactic 13D – Create a list of hard to fill IT positions with programs that aim to fill those positions.
- Tactic 13E – Identify talent gaps that exist or will exist depending on future needs and create a plan to fill them.
- Tactic 13F – Expand the VCCS CIO Leadership Program to provide leadership opportunities and career pathways for IT staff.
- Tactic 13G – Create a collaborative exchange among technology professionals at the VCCS that may include system-wide conferences, workgroups, or other cooperative meetings.